

RADIO TEST REPORT

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Report No.:STS2211125W05

Issued for

Orbit Irrigation Products Inc

845N. Overland Road, North Salt Lake, Utah 84054 USA

Product Name:	CMS Control Unit			
Brand:	Hydro-Rain			
Model Number:	CMS-CU			
Series Model(s):	N/A			
FCC ID:	ML6CMSCU			
IC:	3330A-CMSCU			
Test Standard:	FCC Part 15.247 RSS-247 Issue 2, February 2017 RSS-Gen Issue 5, Amendment 2, February 2021			

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TEST RESULT CERTIFICATION

Applicant's Name:	Orbit Irrigation Products Inc			
Address:	845N. Overland Road, North Salt Lake, Utah 84054 USA			
Manufacturer's Name:	GARDENA Inc.			
Address:	845N. Overland Road, North Salt Lake, Utah 84054 USA			
Product Description				
Product Name:	CMS Control Unit			
Brand:	Hydro-Rain			
Model Number	. CMS-CU			
Series Model(s):	N/A			
	FCC Part15.247 RSS-247 Issue 2, February 2017 RSS-Gen Issue 5, Amendment 2, February 2021			
Test Procedure:	ANSI C63.10-2013			

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC/IC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Test Result:	Pass
Date of Issue	10 Apr. 2023
Date (s) of performance of tests:	08 Feb. 2023 ~ 10 Apr. 2023
Date of receipt of test item:	08 Feb. 2023

Testing Engineer

(Chris Chen)

Technical Manager

(Sean she)

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Authorized Signatory :

(Bovey Yang)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	10 Apr. 2023	STS2211125W05	ALL	Initial Issue



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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247,Subpart C RSS-247 Issue 2					
Standard Section	Test Item	Judgment	Remark		
15.207 RSS-Gen 8.8	Conducted Emission	N/A			
15.247 (a)(2) RSS-Gen 6.7 RSS-247 5.2 (a)	6dB&99% Bandwidth	PASS			
15.247 (b)(3) RSS-247 5.4 (d)	Output Power	PASS			
15.209 RSS-Gen 8.9/8.10	Radiated Spurious Emission	PASS			
15.247 (d) RSS-247 5.5 RSS-Gen 8.9/8.10	Conducted Spurious & Band Edge Emission	PASS			
15.247 (e) RSS-247 5.2 (b)	Power Spectral Density	PASS			
15.205 RSS-Gen 8.9/8.10	Restricted bands of operation	PASS			
Part 15.247(d)/ Part 15.209(a) RSS-247 5.5 RSS-Gen 8.9/8.10	Band Edge Emission	PASS			
15.203 RSS-Gen 6.8	Antenna Requirement	PASS			
RSS-Gen 6.11/8.11	Frequency Stability	PASS			

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2013.

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1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China FCC test Firm Registration Number: 625569 IC test Firm Registration Number: 12108A A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	±1.197dB
2	Unwanted Emissions, conducted	±2.896dB
3	All emissions, radiated 9K-30MHz	±3.84dB
4	All emissions, radiated 30M-1GHz	±3.94dB
5	All emissions, radiated 1G-6GHz	±4.59dB
6	All emissions, radiated>6G	±5.22dB
7	Conducted Emission (9KHz-150KHz)	±2.14dB
8	Conducted Emission (150KHz-30MHz)	±2.54dB



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name/PMN	CMS Control Unit		
Brand	Hydro-Rain		
Model Number/HVIN	CMS-CU		
Series Model(s)	N/A		
Model Difference	N/A		
	The EUT is a CMS	Control Unit	
	Operation Frequency:	2402~2480 MHz	
	Modulation Type:	GFSK	
	Radio Technology:	BLE	
Product Description	Bluetooth	LE (Support 1M DHV 2M DHV)	
	Configuration:	LE (Support 1M PHY, 2M PHY)	
	Number Of Channel:	40	
	Antenna Type:	Ceramic	
	Antenna Gain (dBi) 0.5dBi		
Channel List	Please refer to the N	Note 3.	
Deting	Input: 3.3-6V DC, or	installer in the second s	
Rating	Battery: 6 Alkaline A	A batteries	
Hardware version number	008		
Software version number/FVIN	1.0		
S/N	446755C00001		
Connecting I/O Port(s)	Please refer to the Note 1.		

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.

2. The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

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			Chan	nel List			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequenc y (MHz)
00	2402	10	2422	20	2442	30	2462
01	2404	11	2424	21	2444	31	2464
02	2406	12	2426	22	2446	32	2466
03	2408	13	2428	23	2448	33	2468
04	2410	14	2430	24	2450	34	2470
05	2412	15	2432	25	2452	35	2472
06	2414	16	2434	26	2454	36	2474
07	2416	17	2436	27	2456	37	2476
08	2418	18	2438	28	2458	38	2478
09	2420	19	2440	29	2460	39	2480



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2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions

Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Data/Modulation
Mode 1	TX CH00(2402MHz)	1 MHz/GFSK
Mode 2	TX CH19(2440MHz)	1 MHz/GFSK
Mode 3	TX CH39(2480MHz)	1 MHz/GFSK

Worst Mode	Description	Data/Modulation
Mode 4	TX CH00(2402MHz)	2M PHY /GFSK
Mode 5	TX CH19(2440MHz)	2M PHY /GFSK
Mode 6	TX CH39(2480MHz)	2M PHY /GFSK

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

(2) The battery is fully-charged during the radited and RF conducted test.

For AC Conducted Emission

	Test Case
AC Conducted Emission	N/A

2.3 TEST SOFTWARE AND POWER LEVEL

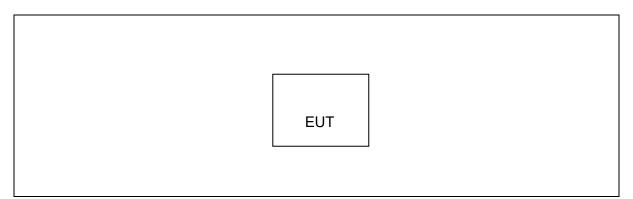
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Туре	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
BLE(With	BLE_1M PHY	GFSK	0.5	6	oommCui
2M PHY)	BLE_2M PHY	GFSK	0.5	6	commGui



2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test





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2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Necessary accessories

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A
		~			

Note:

- (1) For detachable type I/O cable should be specified the length in cm in ^CLength₂ column.
- (2) "YES" is means "with core"; "NO" is means "without core".



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2.6 EQUIPMENTS LIST

		RF Radiation Tes	t Equipment		
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Temperature & Humidity	SW-108	SuWei	N/A	2023.03.03	2024.03.02
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2022.07.04	2023.07.03
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2022.09.29	2023.09.28
18GHz-40GHz Filter	XINGBO	XBLBQ-GTA44	22062003-1	2023.03.06	2024.03.05
Pre-mplifier (18G-40G)	SKET	LNPA_1840-50	SK2018101801	2023.03.06	2024.03.05
Positioning Controller	MF	MF-7802	MF-780208587	N/A	N/A
Signal Analyzer	R&S	FSV 40-N	101823	2022.09.29	2023.09.28
Switch Control Box	N/A	N/A	N/A	N/A	N/A
Filter Box	BALUN Technology	SU319E	BL-SZ1530051	N/A	N/A
Active loop Antenna	ZHINAN	ZN30900C	16035	2023.02.28	2024.02.27
Bilog Antenna	TESEQ	CBL6111D	34678	2022.09.30	2024.09.29
Horn Antenna	SCHWARZBE CK	BBHA 9120D	02014	2021.10.11	2023.10.10
Horn Antenna	A-INFOMW	LB-180400-KF	J211020657	2021.09.28	2023.09.27
Antenna Mast	MF	MFA-440H	N/A	N/A	N/A
Turn Table	MF	SC100_1	60531	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N/A	N/A
DC Power Supply	Zhaoxin	RXN 605D	20R605D11010081	N/A	N/A
Test SW	EZ-EMC		Ver.STSLAB-03A	1 RE	
		Conduction Test	equipment		
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2022.09.29	2023.09.28
LISN	R&S	ENV216	101242	2022.09.28	2023.09.27
LISN	EMCO	3810/2NM	23625	2022.09.28	2023.09.27
Temperature & Humidity	HH660	Mieo	N/A	2022.09.30	2023.09.29
Test SW	EZ-EMC		Ver.STSLAB-03A	1 CE	
		RF Connect	ed Test		
Kind of Equipment	Manufacturer	Туре No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Agilent	N9020A	MY51510623	2023.03.01	2024.02.28
Switch control box	MW	MW100-RFCB	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2022.09.30	2023.09.29
Test SW	MW		MTS 8310_2.0	.0.0	

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3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)		
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	
0.50 -5.0	56.00	46.00	
5.0 -30.0	60.00	50.00	

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

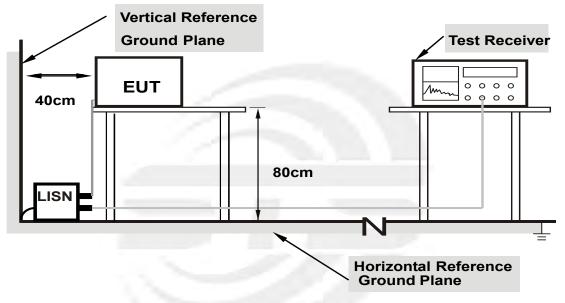
Receiver Parameters	Setting	
Attenuation	10 dB	
Start Frequency	0.15 MHz	
Stop Frequency	30 MHz	
IF Bandwidth	9 kHz	



3.2 TEST PROCEDURE

- a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN is at least 80 cm from the nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

3.3 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



3.5 TEST RESULTS

Temperature:	25.6(C)	Relative Humidity:	45%RH
Test Voltage:	N/A	Phase:	N/A
Test Mode:	N/A		

Note: Battery powered, not applicable.



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4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a)& RSS-Gen Issue 5 and RSS-247 Issue 2, February 2017 (5.5) limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter) (meters)	
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	(dBuV/m) (at 3M)		
FREQUENCY (MHz)	PEAK	AVERAGE	
Above 1000	74	54	

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FCC:

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

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FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)	
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2	
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5	
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7	
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4	
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5	
4.17725 - 4.17775	240 – 285	15.35 - 16.2	
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4	
5.677 - 5.683	399.9 - 410	22.01 - 23.12	
6.215 - 6.218	608 - 614	23.6 - 24.0	
6.26775 - 6.26825	960 - 1427	31.2 - 31.8	
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5	
8.291 - 8.294	1645.5 - 1646.5	Above 38.6	
8.362 - 8.366	1660 - 1710		
8.37625 - 8.38675	1718.8 - 1722.2		
8.41425 - 8.41475	2200 - 2300		
12.29 - 12.293	2310 - 2390		
12.51975 - 12.52025	2483.5 - 2500		
12.57675 - 12.57725	2655 - 2900		
13.36 - 13.41	3260 – 3267		
16.42 - 16.423	3332 - 3339		
16.69475 - 16.69525	3345.8 - 3358		
16.80425 - 16.80475	3500 - 4400		
25.5 - 25.67	4500 - 5150		
37.5 - 38.25	5350 - 5460		
73 - 74.6	7250 - 7750		
74.8 - 75.2	8025 – 8500		
108 – 138			



For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 KHz/150KHz(Peak/QP/AV)
Stop Frequency	150KHz/30MHz(Peak/QP/AV)
	200Hz (From 9kHz to 0.15MHz)/
RB / VB (emission in restricted	9KHz (From 0.15MHz to 30MHz);
band)	200Hz (From 9kHz to 0.15MHz)/
	9KHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP
Start Frequency	30 MHz(Peak/QP)
Stop Frequency	1000 MHz (Peak/QP)
RB / VB (emission in restricted band)	120 KHz / 300 KHz

Spectrum Parameter	Setting	
Attenuation	Auto	
Detector	Peak/AV	
Start Frequency	1000 MHz(Peak/AV)	
Stop Frequency	10th carrier hamonic(Peak/AV)	
RB / VB (emission in restricted	1 MHz / 3 MHz(Peak)	
band)	1 MHz/1/T MHz(AVG)	

For Restricted band

Spectrum Parameter	Setting	
Detector	Peak/AV	
Start/Stop Frequency	Lower Band Edge: 2310 to 2410 MHz	
	Upper Band Edge: 2475 to 2500 MHz	
	1 MHz / 3 MHz(Peak)	
RB / VB	1 MHz/1/T MHz(AVG)	

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Receiver Parameter	Setting	
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV	
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP	
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV	
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP	
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP	

4.2 TEST PROCEDURE

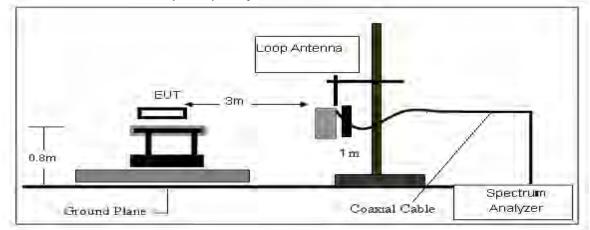
- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos. Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

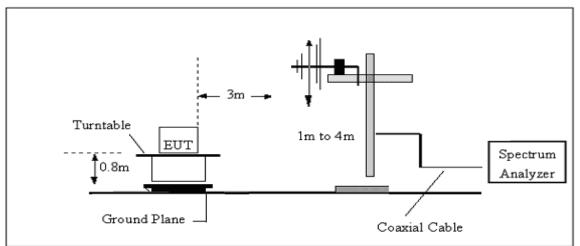


4.3 TEST SETUP

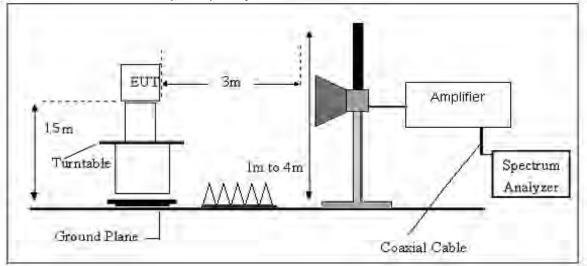
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.4 EUT OPERATING CONDITIONS Please refer to section 3.4 of this report.



4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG Where FS = Field Strength CL = Cable Attenuation Factor (Cable Loss) RA = Reading Amplitude AG = Amplifier Gain AF = Antenna Factor

AF – Antenna F

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG





4.6 TEST RESULTS

(Between 9KHz - 30 MHz)

Temperature:	23.1(C)	Relative Humidtity:	60%RH
Test Voltage:	DC 3V	Polarization:	
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



Shenzhen STS Test Services Co., Ltd.



(30MHz -1000MHz)

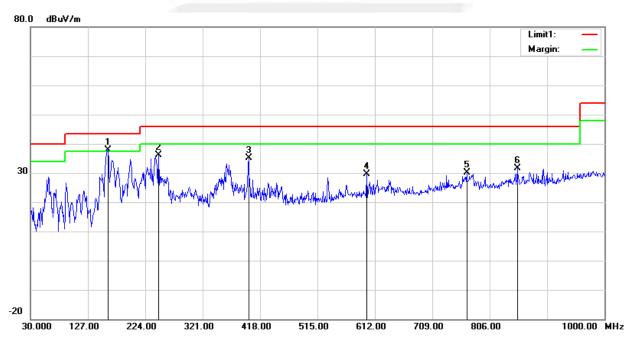
Temperature:	23.1(C)	Relative Humidity:	60%RH	
Test Voltage:	DC 3V	Phase:	Horizontal	
Test Mode:	Mode 1/2/3 (Mode 3 worst mode)			

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	160.9500	56.90	-18.91	37.99	43.50	-5.51	peak
2	246.3100	52.85	-16.76	36.09	46.00	-9.91	peak
3	398.6000	46.42	-11.20	35.22	46.00	-10.78	peak
4	598.4200	35.36	-5.85	29.51	46.00	-16.49	peak
5	767.2000	32.54	-2.29	30.25	46.00	-15.75	peak
6	852.5600	32.34	-0.67	31.67	46.00	-14.33	peak

Remark:

1. Margin = Result (Result = Reading + Factor)-Limit

2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





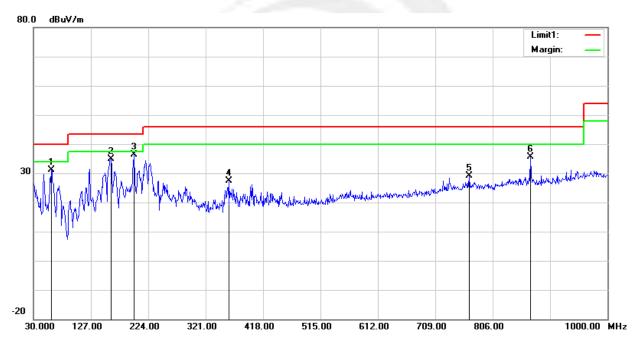
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Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	Mode 1/2/3 (Mode 3 worst mo	ode)	

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	60.0700	56.92	-25.86	31.06	40.00	-8.94	peak
2	160.9500	53.72	-18.91	34.81	43.50	-8.69	peak
3	199.7500	57.48	-21.11	36.37	43.50	-7.13	peak
4	359.8000	40.34	-12.87	27.47	46.00	-18.53	peak
5	766.2300	31.37	-2.27	29.10	46.00	-16.90	peak
6	870.0200	36.16	-0.53	35.63	46.00	-10.37	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





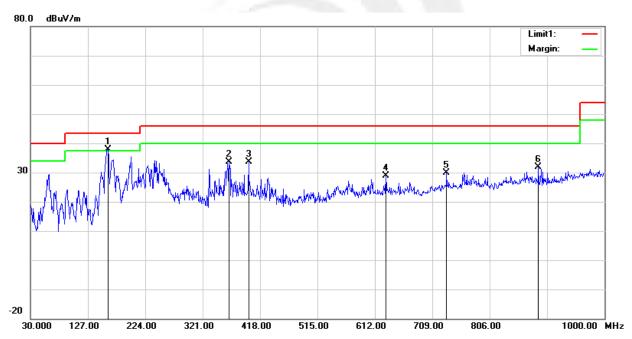
2M PHY

Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	Mode 4/5/6 (Mode 6 worst mo	ode)	

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	160.9500	56.82	-18.91	37.91	43.50	-5.59	peak
2	365.6200	46.30	-12.66	33.64	46.00	-12.36	peak
3	398.6000	44.90	-11.20	33.70	46.00	-12.30	peak
4	630.4300	33.84	-5.03	28.81	46.00	-17.19	peak
5	733.2500	32.31	-2.35	29.96	46.00	-16.04	peak
6	888.4500	32.53	-0.68	31.85	46.00	-14.15	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





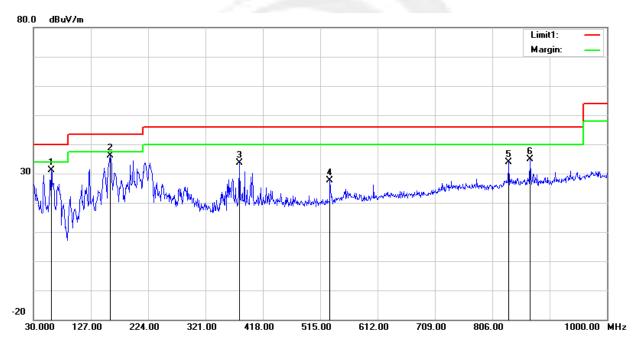
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Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	Mode 4/5/6 (Mode 6 worst mo	ode)	

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	60.0700	57.04	-25.86	31.18	40.00	-8.82	peak
2	159.9800	55.06	-18.81	36.25	43.50	-7.25	peak
3	378.2300	45.88	-12.31	33.57	46.00	-12.43	peak
4	531.4900	35.01	-7.37	27.64	46.00	-18.36	peak
5	834.1300	34.56	-0.59	33.97	46.00	-12.03	peak
6	870.0200	35.30	-0.53	34.77	46.00	-11.23	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





Report No.: STS2211125W05

(1GHz-25GHz) Spurious emission Requirements

1M PHY GFSK

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	
				Low Cł	nannel (GFSK/	2402 MHz)				
3264.87	61.37	44.70	6.70	28.20	-9.80	51.57	74.00	-22.43	PK	Vertical
3264.87	51.29	44.70	6.70	28.20	-9.80	41.49	54.00	-12.51	AV	Vertical
3264.71	60.96	44.70	6.70	28.20	-9.80	51.16	74.00	-22.84	PK	Horizontal
3264.71	50.11	44.70	6.70	28.20	-9.80	40.31	54.00	-13.69	AV	Horizontal
4804.43	58.34	44.20	9.04	31.60	-3.56	54.78	74.00	-19.22	PK	Vertical
4804.43	50.02	44.20	9.04	31.60	-3.56	46.46	54.00	-7.54	AV	Vertical
4804.51	59.39	44.20	9.04	31.60	-3.56	55.83	74.00	-18.17	PK	Horizontal
4804.51	49.38	44.20	9.04	31.60	-3.56	45.82	54.00	-8.18	AV	Horizontal
5359.85	48.36	44.20	9.86	32.00	-2.34	46.01	74.00	-27.99	PK	Vertical
5359.85	39.66	44.20	9.86	32.00	-2.34	37.31	54.00	-16.69	AV	Vertical
5359.59	47.74	44.20	9.86	32.00	-2.34	45.40	74.00	-28.60	PK	Horizontal
5359.59	38.28	44.20	9.86	32.00	-2.34	35.94	54.00	-18.06	AV	Horizontal
7205.73	54.53	43.50	11.40	35.50	3.40	57.93	74.00	-16.07	PK	Vertical
7205.73	43.96	43.50	11.40	35.50	3.40	47.36	54.00	-6.64	AV	Vertical
7205.73	54.62	43.50	11.40	35.50	3.40	58.02	74.00	-15.98	PK	Horizontal
7205.73	43.85	43.50	11.40	35.50	3.40	47.25	54.00	-6.75	AV	Horizontal
	•			Middle C	Channel (GFSK	/2440 MHz)		•		
3263.06	60.97	44.70	6.70	28.20	-9.80	51.17	74.00	-22.83	PK	Vertical
3263.06	50.84	44.70	6.70	28.20	-9.80	41.04	54.00	-12.96	AV	Vertical
3263.10	62.21	44.70	6.70	28.20	-9.80	52.41	74.00	-21.59	PK	Horizontal
3263.10	51.07	44.70	6.70	28.20	-9.80	41.27	54.00	-12.73	AV	Horizontal
4879.86	58.46	44.20	9.04	31.60	-3.56	54.90	74.00	-19.10	PK	Vertical
4879.86	49.28	44.20	9.04	31.60	-3.56	45.72	54.00	-8.28	AV	Vertical
4880.02	58.16	44.20	9.04	31.60	-3.56	54.60	74.00	-19.40	PK	Horizontal
4880.02	50.43	44.20	9.04	31.60	-3.56	46.87	54.00	-7.13	AV	Horizontal
5357.16	49.15	44.20	9.86	32.00	-2.34	46.81	74.00	-27.19	PK	Vertical
5357.16	39.97	44.20	9.86	32.00	-2.34	37.62	54.00	-16.38	AV	Vertical
5357.39	48.35	44.20	9.86	32.00	-2.34	46.01	74.00	-27.99	PK	Horizontal
5357.12	38.44	44.20	9.86	32.00	-2.34	36.10	54.00	-17.90	AV	Horizontal
7320.85	53.98	43.50	11.40	35.50	3.40	57.38	74.00	-16.62	PK	Vertical
7320.85	43.98	43.50	11.40	35.50	3.40	47.38	54.00	-6.62	AV	Vertical
7320.53	53.77	43.50	11.40	35.50	3.40	57.17	74.00	-16.83	PK	Horizontal
7320.53	43.50	43.50	11.40	35.50	3.40	46.90	54.00	-7.10	AV	Horizontal

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				High Char	nel (GFSK/	2480 MHz)				
3264.73	61.33	44.70	6.70	28.20	-9.80	51.53	74.00	-22.47	PK	Vertical
3264.73	51.17	44.70	6.70	28.20	-9.80	41.37	54.00	-12.63	AV	Vertical
3264.71	61.33	44.70	6.70	28.20	-9.80	51.53	74.00	-22.47	PK	Horizontal
3264.71	50.08	44.70	6.70	28.20	-9.80	40.28	54.00	-13.72	AV	Horizontal
4960.42	59.44	44.20	9.04	31.60	-3.56	55.88	74.00	-18.12	PK	Vertical
4960.42	50.03	44.20	9.04	31.60	-3.56	46.47	54.00	-7.53	AV	Vertical
4960.55	59.03	44.20	9.04	31.60	-3.56	55.47	74.00	-18.53	PK	Horizontal
4960.55	50.33	44.20	9.04	31.60	-3.56	46.77	54.00	-7.23	AV	Horizontal
5359.73	48.49	44.20	9.86	32.00	-2.34	46.15	74.00	-27.85	PK	Vertical
5359.73	39.90	44.20	9.86	32.00	-2.34	37.55	54.00	-16.45	AV	Vertical
5359.67	47.28	44.20	9.86	32.00	-2.34	44.93	74.00	-29.07	PK	Horizontal
5359.67	39.04	44.20	9.86	32.00	-2.34	36.69	54.00	-17.31	AV	Horizontal
7439.90	54.38	43.50	11.40	35.50	3.40	57.78	74.00	-16.22	PK	Vertical
7439.90	44.18	43.50	11.40	35.50	3.40	47.58	54.00	-6.42	AV	Vertical
7439.82	53.84	43.50	11.40	35.50	3.40	57.24	74.00	-16.76	PK	Horizontal
7439.82	43.57	43.50	11.40	35.50	3.40	46.97	54.00	-7.03	AV	Horizontal

Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor.

2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.





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2M PHY GFSK

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limits	Margin	Detector	Comment		
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре			
				Low Ch	nannel (GFSK/2	2402 MHz)						
3264.67	61.34	44.70	6.70	28.20	-9.80	51.54	74.00	-22.46	PK	Vertical		
3264.67	51.77	44.70	6.70	28.20	-9.80	41.97	54.00	-12.03	AV	Vertical		
3264.59	62.13	44.70	6.70	28.20	-9.80	52.33	74.00	-21.67	PK	Horizontal		
3264.59	50.87	44.70	6.70	28.20	-9.80	41.07	54.00	-12.93	AV	Horizontal		
4804.43	59.17	44.20	9.04	31.60	-3.56	55.61	74.00	-18.39	PK	Vertical		
4804.43	49.53	44.20	9.04	31.60	-3.56	45.97	54.00	-8.03	AV	Vertical		
4804.36	58.94	44.20	9.04	31.60	-3.56	55.38	74.00	-18.62	PK	Horizontal		
4804.36	49.14	44.20	9.04	31.60	-3.56	45.58	54.00	-8.42	AV	Horizontal		
5359.65	48.80	44.20	9.86	32.00	-2.34	46.46	74.00	-27.54	PK	Vertical		
5359.65	40.43	44.20	9.86	32.00	-2.34	38.08	54.00	-15.92	AV	Vertical		
5359.59	47.27	44.20	9.86	32.00	-2.34	44.93	74.00	-29.07	PK	Horizontal		
5359.59	38.43	44.20	9.86	32.00	-2.34	36.09	54.00	-17.91	AV	Horizontal		
7205.96	53.93	43.50	11.40	35.50	3.40	57.33	74.00	-16.67	PK	Vertical		
7205.96	44.74	43.50	11.40	35.50	3.40	48.14	54.00	-5.86	AV	Vertical		
7205.73	53.75	43.50	11.40	35.50	3.40	57.15	74.00	-16.85	PK	Horizontal		
7205.73	44.24	43.50	11.40	35.50	3.40	47.64	54.00	-6.36	AV	Horizontal		
				Middle C	Channel (GFSK	(/2440 MHz)						
3263.02	60.93	44.70	6.70	28.20	-9.80	51.13	74.00	-22.87	PK	Vertical		
3263.02	51.24	44.70	6.70	28.20	-9.80	41.44	54.00	-12.56	AV	Vertical		
3263.05	61.92	44.70	6.70	28.20	-9.80	52.12	74.00	-21.88	PK	Horizontal		
3263.05	50.58	44.70	6.70	28.20	-9.80	40.78	54.00	-13.22	AV	Horizontal		
4879.99	59.48	44.20	9.04	31.60	-3.56	55.92	74.00	-18.08	PK	Vertical		
4879.99	50.49	44.20	9.04	31.60	-3.56	46.93	54.00	-7.07	AV	Vertical		
4879.94	58.38	44.20	9.04	31.60	-3.56	54.82	74.00	-19.18	PK	Horizontal		
4879.94	49.23	44.20	9.04	31.60	-3.56	45.67	54.00	-8.33	AV	Horizontal		
5357.29	48.95	44.20	9.86	32.00	-2.34	46.61	74.00	-27.39	PK	Vertical		
5357.29	39.09	44.20	9.86	32.00	-2.34	36.75	54.00	-17.25	AV	Vertical		
5357.39	47.82	44.20	9.86	32.00	-2.34	45.48	74.00	-28.52	PK	Horizontal		
5356.97	38.60	44.20	9.86	32.00	-2.34	36.26	54.00	-17.74	AV	Horizontal		
7320.85	54.63	43.50	11.40	35.50	3.40	58.03	74.00	-15.97	PK	Vertical		
7320.85	44.06	43.50	11.40	35.50	3.40	47.46	54.00	-6.54	AV	Vertical		
7320.32	54.67	43.50	11.40	35.50	3.40	58.07	74.00	-15.93	PK	Horizontal		
7320.32	44.22	43.50	11.40	35.50	3.40	47.62	54.00	-6.38	AV	Horizontal		



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				High Char	nel (GFSK/	2480 MHz)				
3264.89	61.89	44.70	6.70	28.20	-9.80	52.09	74.00	-21.91	PK	Vertical
3264.89	50.86	44.70	6.70	28.20	-9.80	41.06	54.00	-12.94	AV	Vertical
3264.62	61.16	44.70	6.70	28.20	-9.80	51.36	74.00	-22.64	PK	Horizontal
3264.62	51.04	44.70	6.70	28.20	-9.80	41.24	54.00	-12.76	AV	Horizontal
4960.30	59.55	44.20	9.04	31.60	-3.56	55.99	74.00	-18.01	PK	Vertical
4960.30	49.21	44.20	9.04	31.60	-3.56	45.65	54.00	-8.35	AV	Vertical
4960.42	59.04	44.20	9.04	31.60	-3.56	55.48	74.00	-18.52	PK	Horizontal
4960.42	50.57	44.20	9.04	31.60	-3.56	47.01	54.00	-6.99	AV	Horizontal
5359.78	48.32	44.20	9.86	32.00	-2.34	45.98	74.00	-28.02	PK	Vertical
5359.78	40.15	44.20	9.86	32.00	-2.34	37.81	54.00	-16.19	AV	Vertical
5359.77	47.28	44.20	9.86	32.00	-2.34	44.93	74.00	-29.07	PK	Horizontal
5359.77	38.88	44.20	9.86	32.00	-2.34	36.54	54.00	-17.46	AV	Horizontal
7439.92	54.60	43.50	11.40	35.50	3.40	58.00	74.00	-16.00	PK	Vertical
7439.92	44.60	43.50	11.40	35.50	3.40	48.00	54.00	-6.00	AV	Vertical
7439.68	54.69	43.50	11.40	35.50	3.40	58.09	74.00	-15.91	PK	Horizontal
7439.68	44.60	43.50	11.40	35.50	3.40	48.00	54.00	-6.00	AV	Horizontal

Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor.

2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.





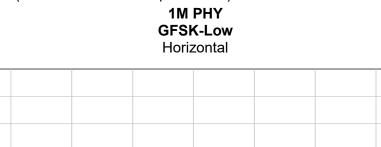
dBuV/m

120.0

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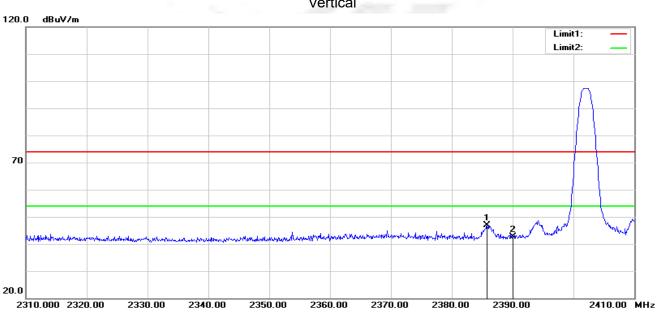
Limit1: Limit2:

4.6 TEST RESULTS (Restricted Bands Requirements)





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.000	42.13	4.28	46.41	74.00	-27.59	peak
2	2390.000	37.56	4.34	41.90	74.00	-32.10	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2385.800	42.55	4.28	46.83	74.00	-27.17	peak
2	2390.000	38.28	4.34	42.62	74.00	-31.38	peak

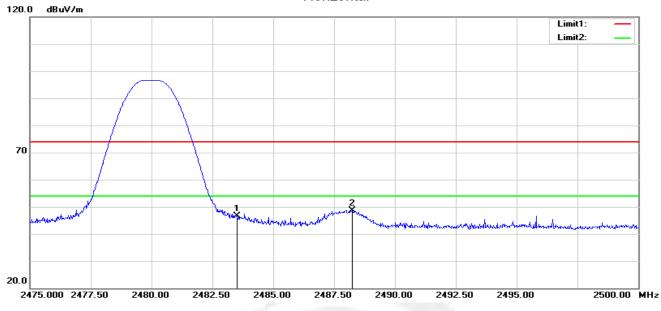
Vertical



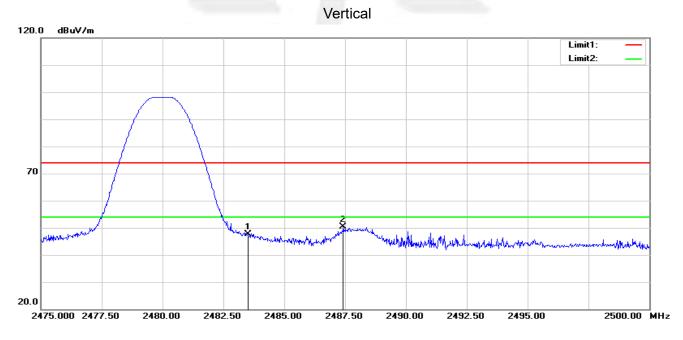
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GFSK-High Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	41.93	4.60	46.53	74.00	-27.47	peak
2	2488.250	44.11	4.62	48.73	74.00	-25.27	peak

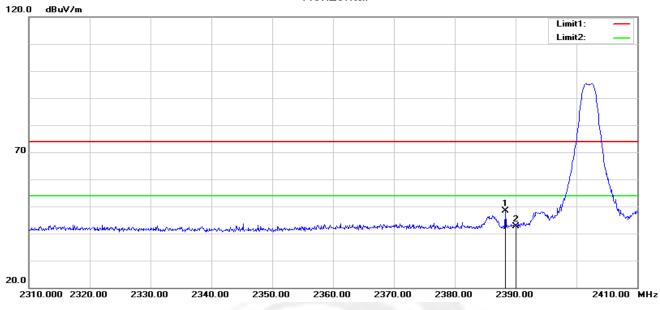


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	42.93	4.60	47.53	74.00	-26.47	peak
2	2487.425	45.88	4.62	50.50	74.00	-23.50	peak

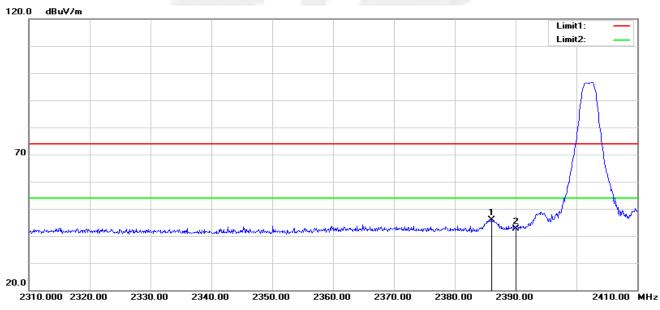


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2M PHY GFSK-Low Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.300	44.12	4.31	48.43	74.00	-25.57	peak
2	2390.000	38.31	4.34	42.65	74.00	-31.35	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.000	41.50	4.28	45.78	74.00	-28.22	peak
2	2390.000	38.29	4.34	42.63	74.00	-31.37	peak

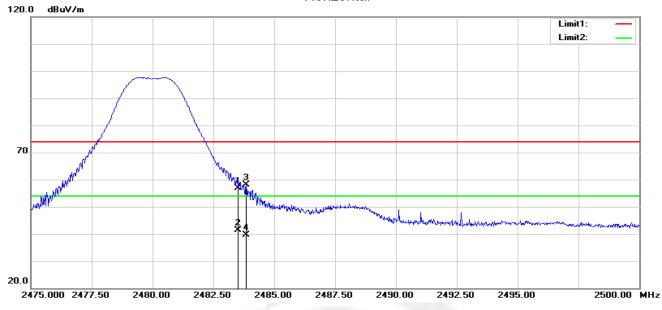
Vertical



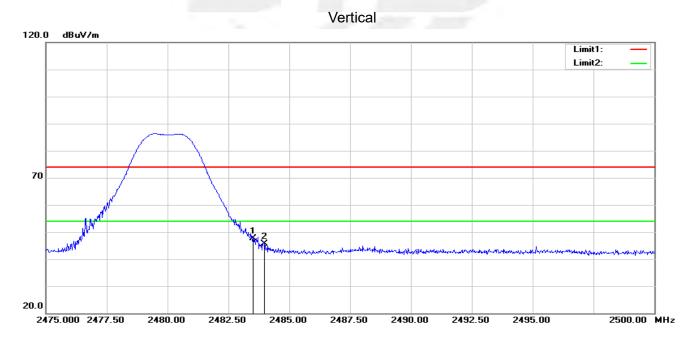
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GFSK-High Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	52.16	4.60	56.76	74.00	-17.24	peak
2	2483.500	36.79	4.60	41.39	54.00	-12.61	AVG
3	2483.850	53.47	4.61	58.08	74.00	-15.92	peak
4	2483.850	35.11	4.61	39.72	54.00	-14.28	AVG



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	43.14	4.60	47.74	74.00	-26.26	peak
2	2483.975	41.14	4.61	45.75	74.00	-28.25	peak

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5. CONDUCTED SPURIOUS & BAND EDGE EMISSION

5.1 LIMIT

According to FCC section 15.247(d)&RSS-247 Issue 2, in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold
For Band edge	
Spectrum Parameter	Setting
Spectrum Parameter Detector	Setting Peak
Detector	-
	Peak
Detector	Peak Lower Band Edge: 2300 – 2407 MHz

5.3 TEST SETUP



The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna termina is 50 Ohm; the path loss as the factor is calibrated to correct the reading. Make the measurement with the spectrum analyzer's resolution bandwidth(RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

5.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

5.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



6. POWER SPECTRAL DENSITY TEST

6.1 LIMIT

		art 15.247,Subpart C SS-247 Issue 2		
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e) RSS-247 Issue 2	Power Spectral Density	≤8 dBm (RBW≥3KHz)	2400-2483.5	PASS

6.2 TEST PROCEDURE

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS channel bandwidth.
- 3. Set the RBW to: 100 kHz \ge RBW \ge 3 kHz.
- 4. Set the VBW \ge 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 TEST SETUP



6.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

6.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



7. BANDWIDTH TEST

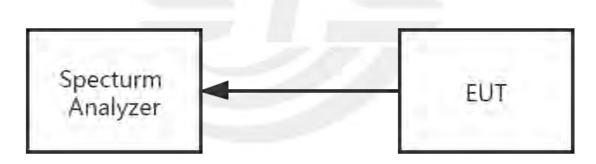
7.1 LIMIT

FCC Part 15.247,Subpart C RSS-Gen Clause 6.7					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247(a)(2) RSS-247 5.2 (a)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS	
RSS-Gen Clause 6.7	99% Bandwidth	For reporting purposes only.	2400-2483.5	PASS	

7.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW \geq 3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be \geq 6 dB.

7.3 TEST SETUP



7.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

7.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



8. PEAK OUTPUT POWER TEST

8.1 LIMIT

FCC Part 15.247,Subpart C							
	RSS-247 Issue 2						
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247(b)(3) RSS 247 Issue 2	Output Power	1 watt or 30dBm	2400-2483.5	PASS			
RSS-247	EIRP	4W	2400-2483.5	PASS			

8.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

 $RBW \ge DTS$ bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW \geq DTS bandwidth.

b) Set VBW \geq [3 × RBW].

c) Set span \geq [3 × RBW].

d) Sweep time = auto couple.

e) Detector = peak.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use peak marker function to determine the peak amplitude level.

Integrated band power method:

The following procedure can be used when the maximum available RBW of the instrument is less than the

DTS bandwidth:

a) Set the RBW = 1 MHz.

b) Set the VBW \geq [3 × RBW].

c) Set the span \geq [1.5 × DTS bandwidth].

d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

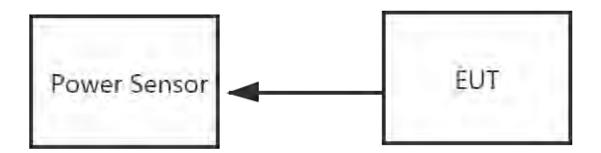
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.







8.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

8.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



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9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2 EUT ANTENNA

The EUT antenna is Ceramic Antenna. It comply with the standard requirement.



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10. FREQUENCY STABILITY

10.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/-0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees.

10.2 TEST PROCEDURE

- 1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- 2. Turn the EUT on and couple its output to spectrum analyzer.
- 3. Turn the EUT off and set the chamber to the highest temperature specified.
- 4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize,turn the EUT on and measure the operating frequency after 2,5,and 10 minutes.
- 5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- 6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

10.3 TEST RESULT

1M PHY

Channel 19 (2440MHz)

Voltage vs. Frequency Stability

Voltage(V)	Measurement Frequency(MHz)
3.45	2440.0022
3	2440.0015
2.55	2440.0013
Max.Deviation(MHz)	0.0022
Max.Deviation(ppm)	0.90

Rated working voltage: DC 3V

Temperature vs. Frequency Stability

Temperature(°C)	Measurement Frequency(MHz)
-30	2440.0027
-20	2440.0024
-10	2440.0026
0	2440.0026
10	2440.0027
20	2440.0022
30	2440.0025
40	2440.0018
50	2440.0023
Max.Deviation(MHz)	0.0027
Max.Deviation(ppm)	1.11



2M PHY

Channel 19 (2440MHz)

Voltage vs. Frequency Stability

Voltage(V)	Measurement Frequency(MHz)
3.45	2440.0023
3	2440.0021
2.55	2440.0013
Max.Deviation(MHz)	0.0023
Max.Deviation(ppm)	0.94

Rated working voltage: DC 3V Temperature vs. Frequency Stability

Temperature(°C)	Measurement Frequency(MHz)
-30	2440.0026
-20	2440.0025
-10	2440.0023
0	2440.0020
10	2440.0024
20	2440.0021
30	2440.0024
40	2440.0025
50	2440.0016
Max.Deviation(MHz)	0.0026
Max.Deviation(ppm)	1.07

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APPENDIX 1-TEST DATA

1. Duty Cycle

Condition	Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	100	0	0
NVNT	BLE 1M	2440	100	0	0
NVNT	BLE 1M	2480	100	0	0
NVNT	BLE 2M	2402	100	0	0
NVNT	BLE 2M	2440	100	0	0
NVNT	BLE 2M	2480	100	0	0





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	Duty	Cycle NV	est Graph /NT BLE	1M 2402MH	Ηz		
ilent Spectrum Analyzer R L RF	- Swept SA 50 Ω AC	SENSE:	niise	ALIGNAUTO		01:26:00	5 PM Feb 09, 20
enter Freq 2.40	2000000 GHz	PNO: Fast +++	Trig: Free Run #Atten: 30 dB	Avg Type: Lo	og-Pwr	TI	RACE 1 2 3 4 TYPE WWWWW DET P N N N
Ref Offse dB/div Ref 20.0	et 0.5 dB						50.00 m).56 dB
			1				
.00			<u>\</u> '				
0.0							
D.0							
0.0							
0.0							
0.0							
enter 2.4020000	0 GHz						Span 0 H
es BW 1.0 MHz		#VBW :	3.0 MHz		Sweep	100.0 ms	
KR MODE TRC SCL 1 N 1 t	× 50.00 ms	Y 0.56 dB		FUNCTION WIDTH	FU	NCTION VALUE	
3							
5							
5 6 7 8 9							
8 9 0							
1							
3				I STATUS			>
3	Duty	Cycle N∖	/NT BLE	-	Чz	-	
ilent Spectrum Analyzer	- Swept SA			1M 2440M	Ηz	01025	
ilent Spectrum Analyzer R L RF	- Swept SA 50 Ω AC 0000000 GHz	SENSE:	PULSE	-		TI	3 PM Feb 09, 20 RACE 1 2 3 4
ilent Spectrum Analyzer R L RF	- Swept SA 50 Ω AC 0000000 GHz	SENSE:		1M 2440MH		TI	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N
Itent Spectrum Analyzer RL RF enter Freq 2.440 Ref Offse d dB/div Ref 20.0	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
Ient Spectrum Analyzer RL RF enter Freq 2.440 Ref Offse dB/div Ref 20.	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWW DET P NNN 50.00 m 1.09 dB
Ient Spectrum Analyzer RL RF enter Freq 2.440 Ref Offse dB/div Ref 20.	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
Ient Spectrum Analyzer RL RF enter Freq 2.441 Ref Offse dB/div Ref 20.1 9 0.0 0.0 0.0	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
Ient Spectrum Analyzer RL RF enter Freq 2.441 Ref Offse dB/div Ref 20.1 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
Ient Spectrum Analyzer RL RF enter Freq 2.441 Ref Offse dB/div Ref 20. 9 0 0 0 0 0 0 0 0 0 0 0 0 0	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
Ient Spectrum Analyzer RL RF enter Freq 2.441 Ref Offse dB/div Ref 20.1 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
Ref Offse 0 dB/div Ref 20.0 29 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	- Swept SA 50 Ω AC 00000000 GHz F IF et 0.5 dB	SENSE:	PULSE	1M 2440MH		™ Mkr1	3 PMFeb 09, 20 RACE 1 2 3 4 TYPE WWWWW DET P N N N 50.00 m
RL RF enter Freq 2.444 Ref Offse 0 dB/div Ref Offse 0.0	- Swept SA 50 g AC 0000000 GHz 	SENSE:	PULSE	1M 2440MH		™ Mkr1	зрмгев 09,20 тасе 112 з 4 тутее иминии вет Р N NN 50.00 m 1.09 dB
Ient Spectrum Analyzer RL RF enter Freq 2.440 Ref Offse dB/div Ref 20.1 29 00 01 02 03 04 05 06 07 08 09 00 00 01 02 03 04 05 06 07 08 09 00 00 010 020 020 020 021 022 023 024 025 026 027 028 029 0300 040 050 050 050 050 050	- Swept SA 50 g AC 0000000 GHz 	SENSE:	PULSE	1M 2440MH	og-Pwr	™ Mkr1	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW DET/P NNN 50.00 m 1.09 dB
Ient Spectrum Analyzer RL RF enter Freq 2.441 Ref Offse 0 dB/div Ref Offse 0 dB/div Ref 20.1 0 0 0 0 0	- Swept SA 50 @ AC 00000000 GHz F F 10 10 10 10 10 10 10 10 10 10	SENSE: PNO: Fast → F Gain:Low 4 Fain:Low 4 Fain:L	PULSE	1M 2440MH	Sweep	T Mkr1	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW 50.00 m 1.09 dB
Ref Offse Ref Offse enter Freq 2.44 Ref Offse 0 dB/div Ref 20.4 0 dB/div Ref 20.4	- Swept SA 50 g AC 0000000 GHz 	SENSE: PNO: Fast → F Gain:Low 4 Fain:Low 4 Fain:L	PULSE		Sweep	™ Mkr1 1 100.0 ms	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW DET/P NNN 50.00 m 1.09 dB
Ref Offse Ref Offse enter Freq 2.44 Ref Offse 0 dB/div Ref 20.4 0 dB/div Ref 20.4	- Swept SA 50 @ AC 00000000 GHz F F 10 10 10 10 10 10 10 10 10 10	SENSE: PNO: Fast → F Gain:Low 4 Fain:Low 4 Fain:L	PULSE		Sweep	™ Mkr1 1 100.0 ms	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW DET/P NNN 50.00 m 1.09 dB
Ref Offse Ref Offse enter Freq 2.44 Ref Offse 0 dB/div Ref 20.4 0 dB/div Ref 20.4	- Swept SA 50 @ AC 00000000 GHz F F 10 10 10 10 10 10 10 10 10 10	SENSE: PNO: Fast → F Gain:Low 4 Fain:Low 4 Fain:L	PULSE		Sweep	™ Mkr1 1 100.0 ms	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW DET/P NNN 50.00 m 1.09 dB
Ref Offse Ref Offse enter Freq 2.44 Ref Offse 0 dB/div Ref 20.4 0 dB/div Ref 20.4	- Swept SA 50 @ AC 00000000 GHz F F 10 10 10 10 10 10 10 10 10 10	SENSE: PNO: Fast → F Gain:Low 4 Fain:Low 4 Fain:L	PULSE		Sweep	™ Mkr1 1 100.0 ms	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW 50.00 m 1.09 dB
Ient Spectrum Analyzer RL RF enter Freq 2.441 Ref Offse 0 dB/div Ref Offse 0 dB/div Ref 20.1 0 0 0 0 0	- Swept SA 50 @ AC 00000000 GHz F F 10 10 10 10 10 10 10 10 10 10	SENSE: PNO: Fast → F Gain:Low 4 Fain:Low 4 Fain:L	PULSE		Sweep	™ Mkr1 1 100.0 ms	SPMFeb 09, 20 MGE 1/2 3 4 TYPE WWWWW 50.00 m 1.09 dB



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Duty Cycle	NVNT BL	LE 1M 2480MHz	<u>_</u>
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Agilent Spectrum Analyzer							
RL RF S	50 Ω AC	SENSE:PULSE		ALIGNAUTO Avg Type:	Log-Pwr	01:40:5 T	4 PMFeb 09, 2023 RACE 1 2 3 4 5 6 TYPE WWWWW
	PN	IO: Fast ↔→ Trig: F Jain:Low #Atten	ree Run : 30 dB				DET P N N N N N
D.(0#						Mkr1	50.00 ms
Ref Offse 10 dB/div Ref 20.0							1.64 dBm
10.0			1				
0.00			<u> </u>				
-10.0							
-20.0							
-30.0							
-40.0							
-50.0							
-60.0							
-70.0							
Center 2.48000000	0 CH2						Span 0 Hz
Res BW 1.0 MHz	0 GHZ	#VBW 3.0 N	1Hz		Sweep	100.0 ms	(10001 pts)
MKR MODE TRC SCL	×	Y	FUNCTION	UNCTION WIDTH	-	UNCTION VALUE	~
1 N 1 t	50.00 ms	1.64 dBm					
3							
5							
2 3 4 5 6 7 7 8 9 10							
8							
10 11							
<)							
MSG				I STATUS			
	Duty (Cycle NVN1	BLE 2	M 2402M	IH7		
		<u>,</u>					
XIRL RF 5	50 Ω AC	SENSE:PULSE		ALIGNAUTO		01:41:3 T	8 PM Feb 09, 2023
XIRL RF 5	50 Ω AC 2000000 GHz Ph	SENSE:PULSE	ree Run			01:41:3 T	RACE 1 2 3 4 5 6
XIRL RF 5	50 Ω AC 2000000 GHz Ph	SENSE:PULSE		ALIGNAUTO		Т	RACE 123456 TYPE WWWWWW DET PNNNNN
RL RF S Center Freq 2.402 Ref Offse	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 1 2 3 4 5 6
Center Freq 2.402 REF Freq 2.402 Ref Offse	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWW DET P N N N N 50.00 ms
RL RF S Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 Log 10.0	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWWW DET P N N N N 50.00 ms
RL RF S Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10 0 0.00	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWWW DET P N N N N 50.00 ms
RL RF 5 Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0 .000 .10.0 .1	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWWW DET P N N N N 50.00 ms
RL RF 5 Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWWW DET P N N N N 50.00 ms
RL RF S Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWW DET P N N N N 50.00 ms
RL RF S Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0 0.00 .10.0	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWW DET P N N N N 50.00 ms
RL RF S Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWW DET P N N N N 50.00 ms
RL RF E Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0	2000000 GHz 2000000 GHz Ph IFG t 0.5 dB	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	RACE 123456 TYPE WWWWWWWW DET P N N N N 50.00 ms
Ref Offse 10 dB/div Ref 20.0 10.0	2000000 GHz P P P F0 t0.5 dB 00 dBm	SENSE:PULSE	ree Run	ALIGNAUTO		Mkr1	50.00 ms 0.27 dBm
RL RF E Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 10.0	2000000 GHz P P P F0 t0.5 dB 00 dBm	SENSE:PULGE	iree Run : 30 dB	ALIGNAUTO	Log-Pwr	Mkr1	Span 0 Hz
RL RF S Center Freq 2.402 Ref Offse 10 dB/div Ref 20.0 100	0 G GHz	SENSE:PULSE 10: Fast →→ Trig: F ain:Low #Atten	iree Run : 30 dB		Log-Pwr	Mkr1	RACE 123456 TYPE WWWWWWW DET P NNNN 50.00 ms
Ref Ref Offse 10 dE/div Ref 20.0 Ref 20.0 0 dE/div Ref 20.0 Ref 20.0 -20 d	2000000 GHz P P P F0 t0.5 dB 00 dBm	SENSE:PULSE 10: Fast →→ Trig: F ain:Low #Atten	iree Run : 30 dB		Log-Pwr	Mkr1	Span 0 Hz
Ref Ref Offse 10 dE/div Ref 20.0 Ref 20.0 0 dE/div Ref 20.0 Ref 20.0 -20 d	80 Q AC 20000000 GHz P P P P P P P P P P P P P	SENSE:PULCE	iree Run : 30 dB		Log-Pwr	Mkr1	Span 0 Hz
Ref Ref Offse 10 dB/div Ref 20.0 Ref 20.0 0 dB/div Ref 20.0 Ref 20.0 -0 dB/div Ref 20.0 Ref 20.0 -10 dB/div Ref 20.0 Ref 20.0 -20 dB/div Ref 20.0 Ref 20.0 -30 dB/div Ref 20.0 Ref 20.0 -40 dB/div Ref 20.0 Ref 20.0 -30 dB/div Ref 20.0 Ref 20.0 -40 dB/div Ref 20.0 Ref 20.0 -50 dB/div Ref 20.0 Ref 20.0 -60 dB/div Ref 20.0 Ref 20.0 -70 dB/div Ref 20.0 Ref 20.0 -70 dB/div Ref 20.0 Ref 20.0 -70 dB/div Ref 20.0 Ref 20.0	80 Q AC 20000000 GHz P P P P P P P P P P P P P	SENSE:PULCE	iree Run : 30 dB		Log-Pwr	Mkr1	Span 0 Hz
Ref Ref Offse 10 dB/div Ref 20.0 Ref 20.0 0 dB/div Ref 20.0 Ref 20.0 -0 dB/div Ref 20.0 Ref 20.0 -10 dB/div Ref 20.0 Ref 20.0 -20 dB/div Ref 20.0 Ref 20.0 -30 dB/div Ref 20.0 Ref 20.0 -40 dB/div Ref 20.0 Ref 20.0 -30 dB/div Ref 20.0 Ref 20.0 -40 dB/div Ref 20.0 Ref 20.0 -50 dB/div Ref 20.0 Ref 20.0 -60 dB/div Ref 20.0 Ref 20.0 -70 dB/div Ref 20.0 Ref 20.0 -70 dB/div Ref 20.0 Ref 20.0 -70 dB/div Ref 20.0 Ref 20.0	80 Q AC 20000000 GHz P P P P P P P P P P P P P	SENSE:PULCE	iree Run : 30 dB		Log-Pwr	Mkr1	Span 0 Hz
Ref Ref Offse 10 dE/div Ref 20.0 Ref 20.0 0 dE/div Ref 20.0 Ref 20.0 -20 d	80 Q AC 20000000 GHz P P P P P P P P P P P P P	SENSE:PULCE	iree Run : 30 dB		Log-Pwr	Mkr1	Span 0 Hz
X RL RF S Center Freq 2.402 Ref Offse S 10 dB/div Ref 20.0 0.00 0.00 10.0 0.00 0.00 0.00 -10.0 0.00 0.00 0.00 -20.0 0.00 0.00 0.00 -30.0 0.00 0.00 0.00 -40.0 0.00 0.00 0.00 -50.0 0.00 0.00 0.00 -60.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00 -70.0 0.00 0.00 0.00	80 Q AC 20000000 GHz P P P P P P P P P P P P P	SENSE:PULGE	iree Run : 30 dB		Log-Pwr	Mkr1	RACE 11 23 45 6 50.00 ms 0.27 dBm 50.27 dBm 50.27 dBm 50.27 dBm 50.27 dBm
Ref Ref Offse 10 dE/div Ref 20.0 Ref 20.0 0 dE/div Ref 20.0 Ref 20.0 -20 d	80 Q AC 20000000 GHz P P P P P P P P P P P P P	SENSE:PULGE	iree Run : 30 dB		Log-Pwr	Mkr1	Span 0 Hz

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Duty Cycle NVNT BLE 2M 2440MHz

Agilent Spectrum Analyzer - Sw							
₩ RL RF 50 G Center Freq 2.4400		SENSE:PULS	E	ALIGNAUTO Avg Type	: Log-Pwr	01:45:2 T	3 PM Feb 09, 2023 RACE 1 2 3 4 5 6 TYPE WWWWWWW
Contor 1109 2.4400	PNO	D: Fast ↔→ Trig ain:Low #Att	: Free Run en: 30 dB		-		DET P N N N N
						Mkr1	50.00 ms
Ref Offset 0. 10 dB/div Ref 20.00							0.87 dBm
Log							
10.0							
0.00							
-10.0							
-20.0							
-30.0							
-40.0							
-50.0							
-60.0							
-70.0							
Center 2.440000000	GHz						Span 0 Hz
Res BW 1.0 MHz		#VBW 3.0	MHz		Sweep	100.0 ms	(10001 pts
MKB MODE TRC SCL	× 50.00 ms	Y 0.87 dBm	FUNCTION	FUNCTION WIDTH	f	UNCTION VALUE	^
1 N 1 t 2 3	50.00 ms	0.67 dBm					
4							
5							
6 7 8 9 10							
9							
10 11							
<							
ISG							
	Duty C	vcle NVN	T BLE	2M 2480N	ИНz		
Agilent Spectrum Analyzer - Sw	vept SA						
<mark>X/</mark> RL RF 50 Ω	2 AC	SENSE:PULS		ALIGNAUTO		02:26:0	6 PM Feb 09, 2023
<mark>X/</mark> RL RF 50 Ω	2 AC 00000 GHz PN0	SENSE:PULS	E : Free Run	ALIGNAUTO	: Log-Pwr	02:26:0 T	RACE 1 2 3 4 5 (
<mark>X/</mark> R L RF 50 Ω	2 AC 00000 GHz PN0	SENSE:PULS	E	ALIGNAUTO		Т	6 PMFeb 09, 2023 RACE 1 2 3 4 5 (TYPE WWWWWWWW DET P N N N N
RL RF 50 Center Freq 2.4800	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 12345 TYPE WWWWWW DET P NNNN
RL RF 50 £ Center Freq 2.4800 Ref 0ffset 0. Ref Offset 0. Ref 20.00 Og Context	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 12345 TYPE WWWWWW DET P NNNN
RL RF 50 \$2 Center Freq 2.4800 Ref Offset 0. 0 dB/div Ref 20.00 0 dB/div Ref 20.00	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 1 2 3 4 5 TYPE WWWWWW DET P NNNN 50.00 ms
RL RF 50 S Center Freq 2.4800 Ref Offset 0. 10 dB/div Ref 20.00 10.0 0.00	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 1 2 3 4 5 TYPE WWWWWW DET P NNNN 50.00 ms
RL RF 50 \$2 Center Freq 2.4800 Ref Offset0. 10 dB/div Ref 20.00 10.0	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 12345 TYPE WWWWWW DET P NNNN
RL RF 50 \$2 Center Freq 2.4800 Ref Offset0. 10 dB/div Ref 20.00 10.0	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 12345 TYPE WWWWWW DET P NNNN
RL RF 50 \$2 Center Freq 2.4800 Ref Offset0. 10 dB/div Ref 20.00 10.0	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 12345 TYPE WWWWWW DET P NNNN
RL RF 50 \$2 Center Freq 2.4800 Ref Offset0. 10 dB/div Ref 20.00 0 0	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 12345 TYPE WWWWWW DET P NNNN
RL RF 50 \$2 Center Freq 2.4800 Ref Offset0. 10 dB/div Ref 20.00 0 00	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	
RL RF 50 \$ Center Freq 2.4800 Ref Offset0 10 dB/div Ref 20.00 10.0	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	RACE 1 2 3 4 5 (
RL RF 50 \$2 Center Freq 2.4800 Ref Offset0 10 dB/div Ref 20.00 10.0	2 AC 000000 GHz PNO IFG2 5 dB	SENSE:PULS	E : Free Run	ALIGNAUTO		Mkr1	
RL RF 50 \$ Center Freq 2.4800 Ref Offset 0. 10 dB/div Ref 20.00 10.0	2 AC PNO 00000 GHz PNO IFG2 5 dB dBm	SENSE:PULS	E	ALIGNAUTO	: Log-Pwr	Mkr1	RACE 11 2 3 4 5. TYPE WWWWDET P NNNN 50.00 ms 1.44 dBm 50.00 ms 1.44 dBm 50.00 ms
RL RF 50 \$ Center Freq 2.4800 Ref Offset 0. 10 dB/div Ref 20.00 10 dB/div Ref	2 AC PNO 00000 GHz PNO IFG2 5 dB dBm	SENSE:PULS	E	ALIGNAUTO	: Log-Pwr	Mkr1	RACE 2345 TYPE 2355 TYPE 23555 TYPE 23555 TYPE 23555 TYPE 235555 TYPE 235555555555555555555555555555555555
RL RF S0 S Center Freq 2.4800 Ref Offset0. 10 dB/div Ref 20.00 10 dB/div Ref 2	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB	ALIGNAUTO	: Log-Pwr	Mkr1	RACE 11 2 3 4 5. TYPE WWWWDET P NNNN 50.00 ms 1.44 dBm 50.00 ms 1.44 dBm 50.00 ms
RL RF 50 g Center Freq 2.4800 Ref Offset 0. 10 dE/div Ref 20.00 000 Ref 20.00 10.0 Ref 20.00	2 AC PNO 00000 GHz PNO IFG2 5 dB dBm	SENSE:PULS	E Free Run en: 30 dB		: Log-Pwr	Mkr1	RACE 11 2 3 4 5. TYPE WWWWDET P NNNN 50.00 ms 1.44 dBm 50.00 ms 1.44 dBm 50.00 ms
RL RF 50 g Center Freq 2.4800 Ref Offset 0. 10 dE/div Ref 20.00 000 Ref 20.00 10.0 Ref 20.00	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB		: Log-Pwr	Mkr1	RACE 2345 TYPE 2355 TYPE 23555 TYPE 23555 TYPE 23555 TYPE 235555 TYPE 235555555555555555555555555555555555
Ref Offset 0. 10 dB/div Ref 20.00 -20 d	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB		: Log-Pwr	Mkr1	RACE 2345 TYPE 2355 TYPE 23555 TYPE 23555 TYPE 23555 TYPE 235555 TYPE 235555555555555555555555555555555555
X RL RF 50 g Center Freq 2.4800 Ref Offset 0. S0 g 10 Berner Freq 2.4800 S0 g 10.0 S0 g S0 g -20.0 S0 g S0 g -30.0 S0 g S0 g -40.0 S0 g S0 g -50.0 S0 g S0 g -60.0 S0 g S0 g -70.0 S0 g S0 g Center 2.4800000000 g Res BW 1.0 MHz	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB		: Log-Pwr	Mkr1	RACE 2345 TYPE 2355 TYPE 23555 TYPE 23555 TYPE 23555 TYPE 235555 TYPE 235555555555555555555555555555555555
RL RF 50 g Center Freq 2.4800 Ref Offset 0. 10 dB/div Ref 20.00 00 g	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB		: Log-Pwr	Mkr1	RACE 1 2 3 4 5 TYPE W-MNN DET P NNNN 50.00 ms 1.44 dBm 1.44 dBm
RL RF 50 S Center Freq 2.4800 Ref Offset 0. O dB/div Ref 20.00 O State D D D State D D D D State D D D D State D D D <td>2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz</td> <td>SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att</td> <td>E Free Run en: 30 dB</td> <td></td> <td>: Log-Pwr</td> <td>Mkr1</td> <td>RACE 1 2 3 4 5 TYPE W-MNN DET P NNNN 50.00 ms 1.44 dBm 1.44 dBm</td>	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB		: Log-Pwr	Mkr1	RACE 1 2 3 4 5 TYPE W-MNN DET P NNNN 50.00 ms 1.44 dBm 1.44 dBm
RL RF 50 g Center Freq 2.4800 Ref Offset 0. 10 dE/div Ref 20.00 000 Ref 20.00 10.0 Ref 20.00	2 AC PNO 00000 GHz PNO IFGa 5 dB dBm dBm GBm GBm GHz	SENSE:PULS D: Fast → Trig in:Low #Att #Att #Att #Att #Att #Att	E Free Run en: 30 dB		: Log-Pwr	Mkr1	Span 0 Hz



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2. Maximum Average Conducted Output Power

Condition	Mode	Frequency	Conducted Power	Duty Factor	Total Power	Limit	Verdict
		(MHz)	(dBm)	(dB)	(dBm)	(dBm)	
NVNT	BLE 1M	2402	0.56	0	0.56	<=30	Pass
NVNT	BLE 1M	2440	1.06	0	1.06	<=30	Pass
NVNT	BLE 1M	2480	1.65	0	1.65	<=30	Pass
NVNT	BLE 2M	2402	0.57	0	0.57	<=30	Pass
NVNT	BLE 2M	2440	1.14	0	1.14	<=30	Pass
NVNT	BLE 2M	2480	1.73	0	1.73	<=30	Pass

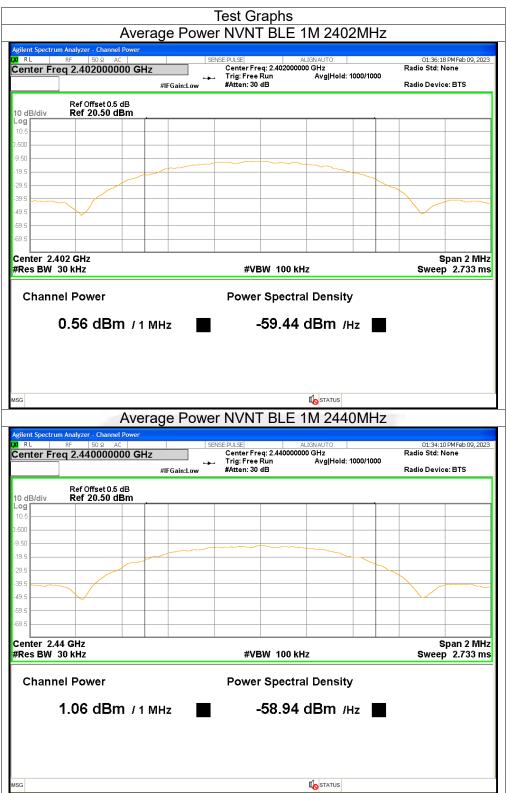


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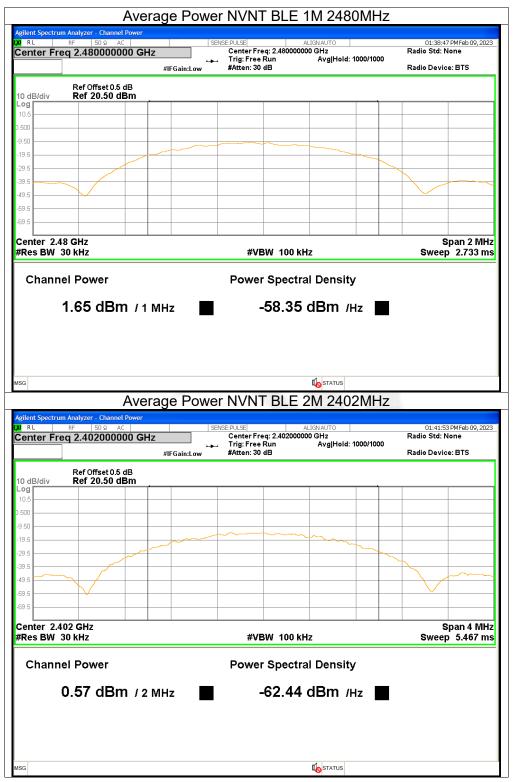


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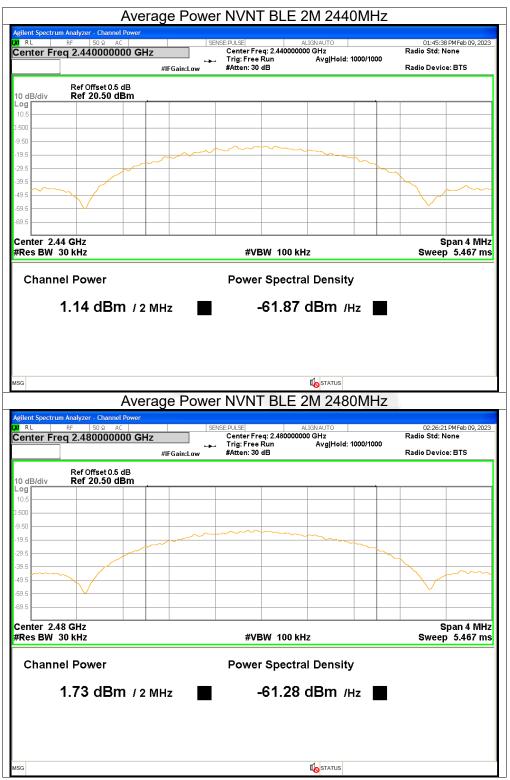


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3. Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	0.72	<=30	Pass
NVNT	BLE 1M	2440	1.27	<=30	Pass
NVNT	BLE 1M	2480	1.81	<=30	Pass
NVNT	BLE 2M	2402	0.71	<=30	Pass
NVNT	BLE 2M	2440	1.29	<=30	Pass
NVNT	BLE 2M	2480	1.85	<=30	Pass

EIRP 1M PHY

		1101 1	111		
Test Channel	Frequency	Peak Conducted Output Power	Antenna Gain	EIRP Power	LIMIT
	(MHz)	(dBm)	(dBi)	(dBm)	dBm
CH0	2402	0.72	0.50	1.22	36.02
CH19	2440	1.27	0.50	1.77	36.02
CH39	2480	1.81	0.50	2.31	36.02

2M PHY

Test Channel	Frequency	Peak Conducted Output Power	Antenna Gain	EIRP Power	LIMIT
	(MHz)	(dBm)	(dBi)	(dBm)	dBm
CH0	2402	0.71	0.50	1.21	36.02
CH19	2440	1.29	0.50	1.79	36.02
CH39	2480	1.85	0.50	2.35	36.02

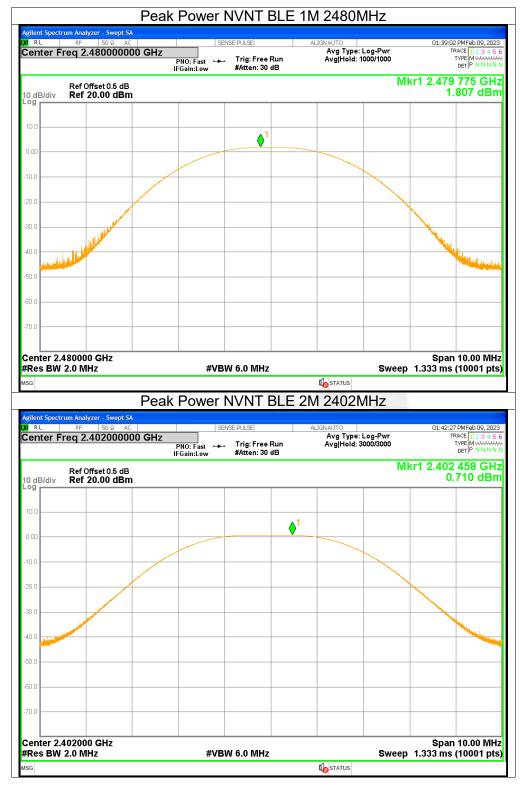


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		Power	NVNT BL	E 1M 2402N	/Hz		
i <mark>lent Spectrum Analyzer - Swept SA</mark> RL RF 50 Ω AC		S	ENSE:PULSE	ALIGNAUTO		01:36:33 PM Feb	09,202
enter Freq 2.4020000		PNO: Fast ↔ IFGain:Low	_, Trig: Free Run #Atten: 30 dB	Avg Type: Avg Hold: 1	Log-Pwr 000/1000	TRACE 1 TYPE M DET P	2345 WAXAAA NNNN
Ref Offset 0.5 dB		- CONNECT			М	kr1 2.402 234 0.724	
dB/div Ref 20.00 dBm							
0.0							
.00			•				
0.0							
0.0							
							Madada
0.0							
.0							
.0							
enter 2.402000 GHz Res BW 2.0 MHz		#VE	BW 6.0 MHz		Sweep	Span 10.0 1.333 ms (100	
G				STATUS	-		_
G		Power	NVNT BL	1M 2440N	-		
i <mark>lent Spectrum Analyzer - Swept SA</mark> RL RF 50Ω AC	A :		NVNT BLI	E 1M 2440N	́ИНz	01:34:24 PMFet	09,202
i <mark>lent Spectrum Analyzer - Swept SA</mark> RL RF 50Ω AC	00 GHz		ENSE:PULSE	E 1M 2440N	MHZ Log-Pwr	01:34:24 PMFet TRACE 1 TYPE M	2345
Ient Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freq 2.44000000 Ref Offset 0.5 dB dB/div Ref 20.00 dBm	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFet TRACE 1 TYPE M	2345 WWWWW NNNN
Ient Spectrum Analyzer - Swept SA RL RF 50 Q AC enter Freq 2.440000000 Ref Offset 0.5 dB dB/div Ref 20.00 dBm	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 WWWWW NNNN
Ient Spectrum Analyzer - Swept SA RL RF 50 Q AC enter Freq 2.440000000 Ref Offset 0.5 dB dB/div Ref 20.00 dBm	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 NNNN
Ilent Spectrum Analyzer - Swept SA RL RF 50 \u03c0 enter Freq 2.440000000 Ref Offset 0.5 dB rdB/div Ref 20.00 dBm	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 NNNN
Ilent Spectrum Analyzer - Swept SA RL RF 50 & AC enter Freq 2.44000000 Ref Offset 0.5 dB rdB/div Ref 20.00 dBm	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 NNNN
Ilent Spectrum Analyzer - Swept SA RL RF 50 α AC enter Freq 2.440000000 Ref Offset 0.5 dB dB/div Ref Offset 0.5 dB dB/div 00 00 00 00	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 NNNN
Ient Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freq 2.440000000 Ref Offset 0.5 dB B dB/div Ref 20.00 dBm B 00 0 0 0 00 0 0 0	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 NNNN
Ilent Spectrum Analyzer - Swept SA RL RF 50 R AC enter Freq 2.440000000 Ref Offset 0.5 dB dB/div Ref 20.00 dBm 00 00 00 00 00 00 00 00 00 0	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFel TRACE 1 TYPE[M DET]P kr1 2.439 97(2345 NNNN
Ilent Spectrum Analyzer - Swept SA RL RF 50 & AC enter Freq 2.440000000 Ref Offset 0.5 dB dB/div Ref 20.00 dBm 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFed TRACE 1 Type[M pet]P kr1 2.439 97(1.268	2345 NNNN
Ident Spectrum Analyzer - Swept SA RL RF 50 A AC enter Freq 2.440000000 dB/div Ref Offset 0.5 dB Ref Offset 0.5 dB dB/div Ref 20.00 dBm 00 00 00 00 00 00 00 00 00 0	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFed TRACE 1 Type[M pet]P kr1 2.439 97(1.268) GH dBr
Ilent Spectrum Analyzer - Swept SA RL RF 50 & AC enter Freq 2.440000000 Ref Offset 0.5 dB dB/div Ref 20.00 dBm 9 00 00 00 00 00 00 00 00 00	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFed TRACE 1 Type[M pet]P kr1 2.439 97(1.268) GH dBr
Ident Spectrum Analyzer - Swept SA RL RF 50 A AC enter Freq 2.440000000 dB/div Ref Offset 0.5 dB Ref Offset 0.5 dB dB/div Ref 20.00 dBm 00 00 00 00 00 00 00 00 00 0	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFed TRACE 1 Type[M pet]P kr1 2.439 97(1.268) GH dBr
Ient Spectrum Analyzer Swept SA RL RF 50 Q AC enter Freq 2.44000000 Ref Offset 0.5 dB B dB/div Ref 20.00 dBm 0 0 00 0 0 0 0 00 0 0 0 0 0 00 0 0 0 0 0 0 00 0	00 GHz	PNO: Fast	ENSE:PULSE	E 1M 2440N ALIGNAUTO Avg Type:	/HZ Log-Pwr 000/1000	01:34:24 PMFed TRACE 1 Type[M pet]P kr1 2.439 97(1.268	0 GH dBr





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Peak Power NVNT BLE 2M 2440MHz

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4. -6dB Bandwidth

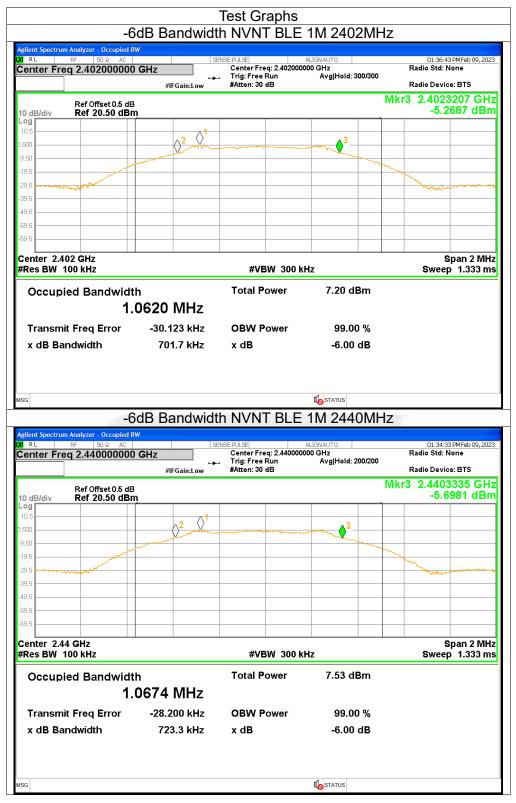
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.7017	>=0.5	Pass
NVNT	BLE 1M	2440	0.7233	>=0.5	Pass
NVNT	BLE 1M	2480	0.7213	>=0.5	Pass
NVNT	BLE 2M	2402	1.2991	>=0.5	Pass
NVNT	BLE 2M	2440	1.2102	>=0.5	Pass
NVNT	BLE 2M	2480	1.1417	>=0.5	Pass



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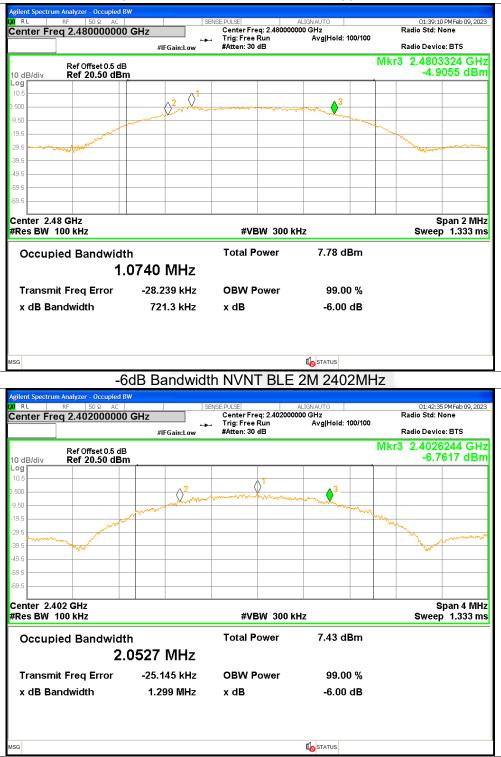




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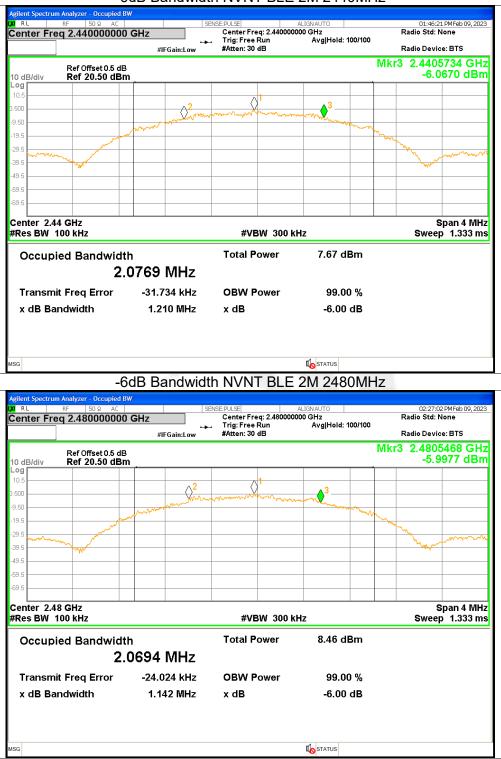
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5. Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	BLE 1M	2402	1.0572
NVNT	BLE 1M	2440	1.0658
NVNT	BLE 1M	2480	1.0696
NVNT	BLE 2M	2402	2.0476
NVNT	BLE 2M	2440	2.0584
NVNT	BLE 2M	2480	2.0758

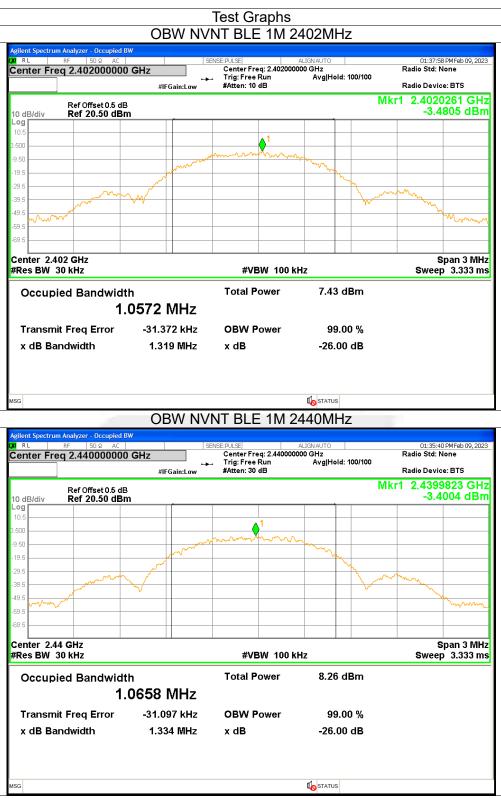


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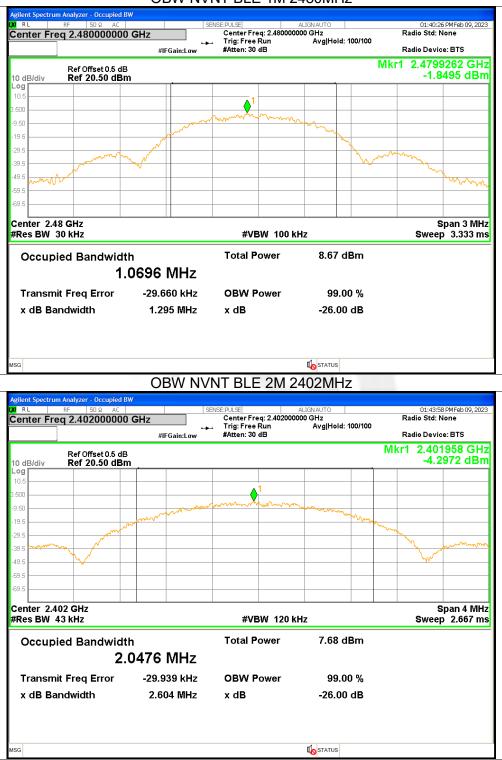




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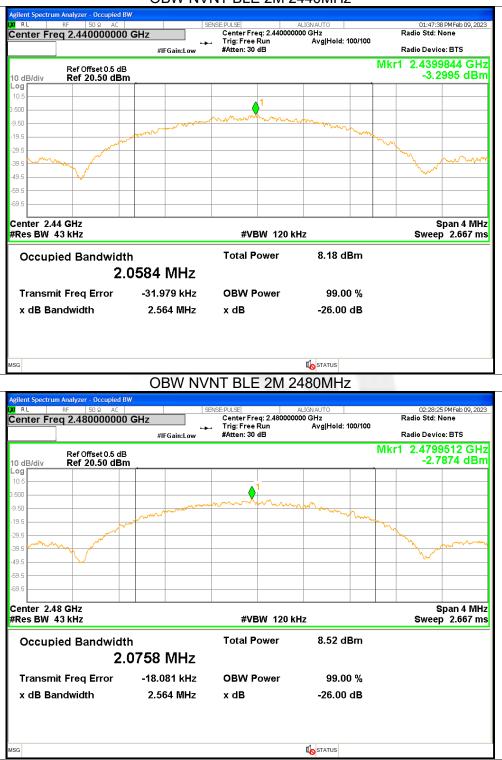




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6. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-12.27	<=8	Pass
NVNT	BLE 1M	2440	-11.94	<=8	Pass
NVNT	BLE 1M	2480	-11.11	<=8	Pass
NVNT	BLE 2M	2402	-13.23	<=8	Pass
NVNT	BLE 2M	2440	-13.9	<=8	Pass
NVNT	BLE 2M	2480	-13.32	<=8	Pass

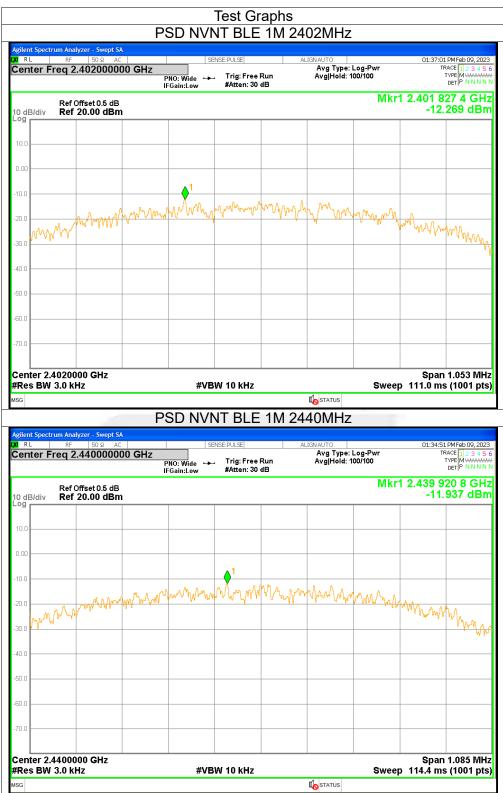


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Shenzhen STS Test Services Co., Ltd.



PSD NVNT BLE 1M 2480MHz ectrum Analyzer - Swept SA lent Sp R I 28 PM Feb 09, 2023 Center Freq 2.480000000 GHz Avg Type: Log-Pw Avg|Hold: 100/100 RACE 12345 TYPE MWWWW DET PNNNN Trig: Free Run #Atten: 30 dB PNO: Wide IFGain:Low Mkr1 2.479 913 4 GHz Ref Offset 0.5 dB Ref 20.00 dBm 10 dB/div -11.111 dBm MMMMMM MMM mm/ NAWY Marin Mr. M. M. M. M. M 20.0 WWWWWW www. 30. 4N (50.0 60. Center 2.4800000 GHz Span 1.082 MHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 114.1 ms (1001 pts) **I**STATUS sG PSD NVNT BLE 2M 2402MHz 40:44 PM Feb 09, 2023 TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N Center Freq 2.402000000 GHz Avg Type: Log-Pw Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB PNO: Wide 🔸 IFGain:Low Mkr1 2.402 013 6 GHz Ref Offset 0.5 dB Ref 20.00 dBm -13.232 dBm 10 dB/div n nr 10.0 war white war and the second 20.0 30.0 40.0 50.0 60 Center 2.4020000 GHz Span 1.949 MHz Sweep 205.5 ms (1001 pts) #Res BW 3.0 kHz #VBW 10 kHz

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SG

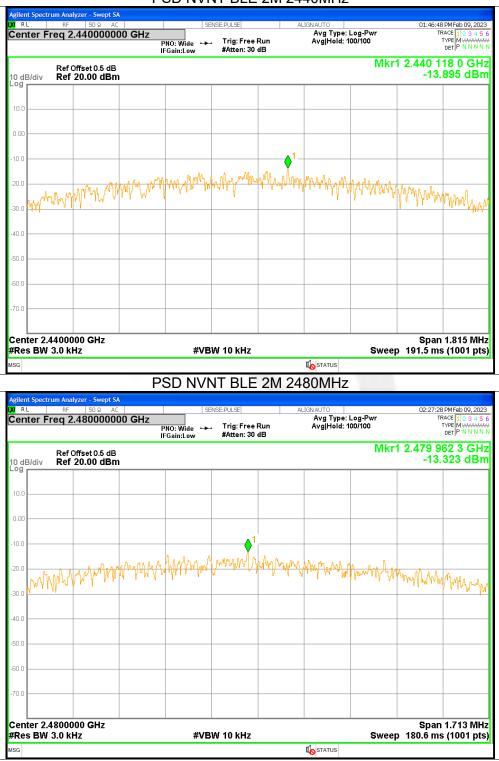
A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China Tel: +86-755 3688 6288 Fax:+86-755 3688 6277 Http://www.stsapp.com E-mail: sts@stsapp.com

ISTATUS



PSD NVNT BLE 2M 2440MHz

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7. Band Edge

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-50.14	<=-20	Pass
NVNT	BLE 1M	2480	-51	<=-20	Pass
NVNT	BLE 2M	2402	-30.71	<=-20	Pass
NVNT	BLE 2M	2480	-50.97	<=-20	Pass

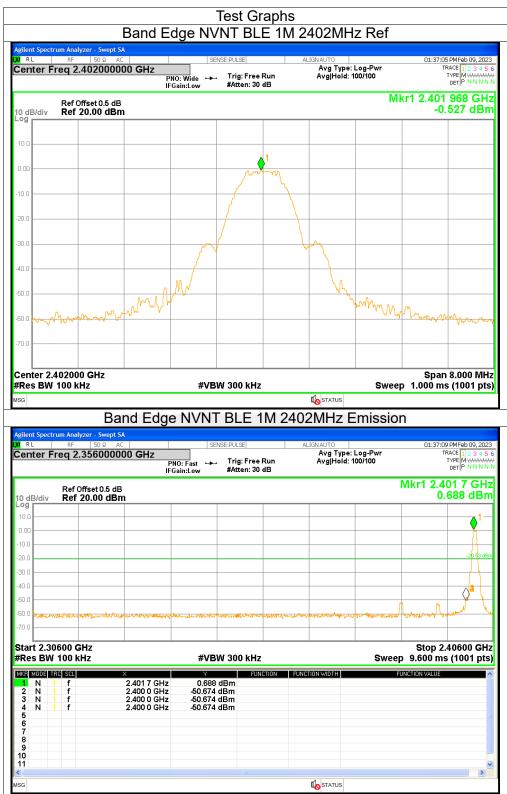


Shenzhen STS Test Services Co., Ltd.

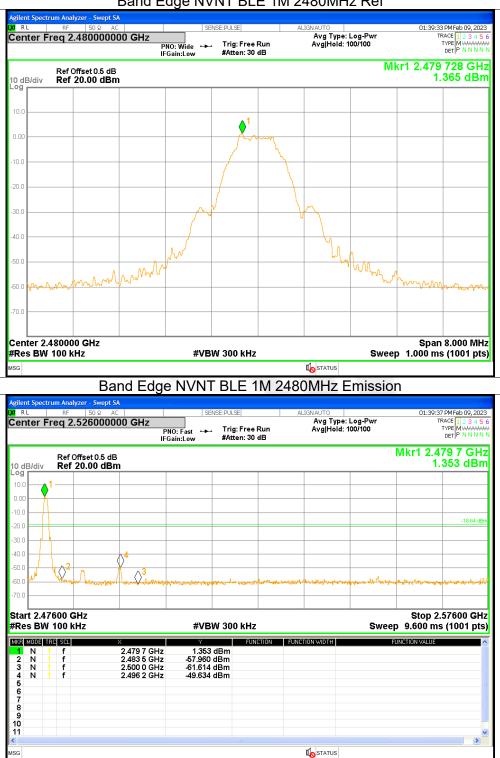


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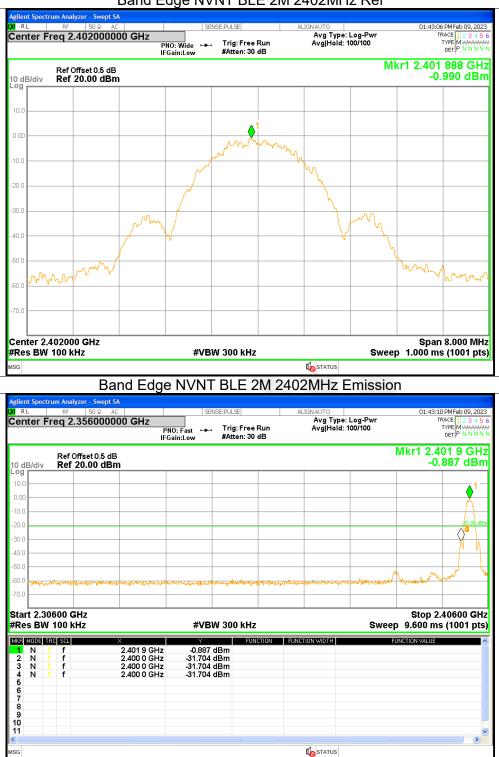




Band Edge NVNT BLE 1M 2480MHz Ref

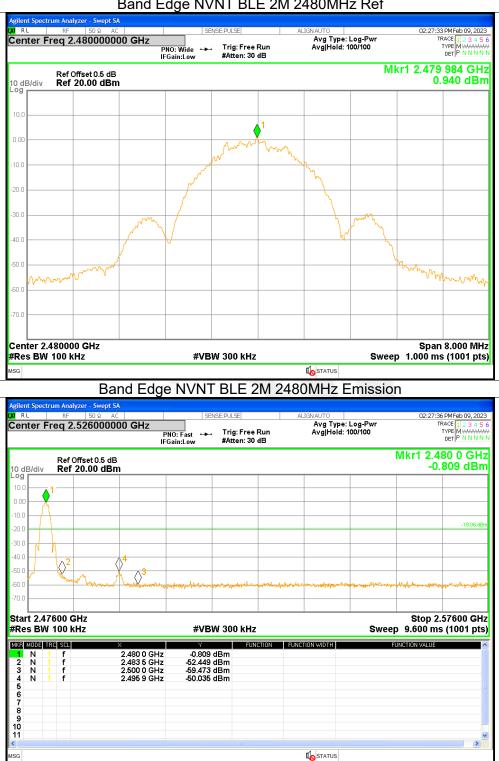
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8. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-39.26	<=-20	Pass
NVNT	BLE 1M	2440	-43.48	<=-20	Pass
NVNT	BLE 1M	2480	-41.69	<=-20	Pass
NVNT	BLE 2M	2402	-41.15	<=-20	Pass
NVNT	BLE 2M	2440	-43.51	<=-20	Pass
NVNT	BLE 2M	2480	-51.24	<=-20	Pass



Shenzhen STS Test Services Co., Ltd.



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Report No.: STS2211125W05

	Tx. S	purious N	Test Graphs	M 2402MHz Ref	
	alyzer - Swept SA 50 Ω AC		ENSE:PULSE	ALIGNAUTO	01:37:14 PM Feb 09, 2
	2.402000000 GHz			Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 TYPE MWWW DET P N N
dB/div Ref	Offset 0.5 dB 7 20.00 dBm			Mkr	1 2.401 716 5 GI 0.576 dB
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	кнz Tx. Spur		BW 300 KHZ	Swee Status 2402MHz Emissio	
ent Spectrum Ana RL RF	Tx. Spur	ious NVN	IT BLE 1M 2	ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 2 TRACE 12 3 4 TYPE MWWW
	Tx. Spur	ious NVN	IT BLE 1M 2	2402MHz Emissio	DN 01:37:50 PMFeb 09,22 TRACE 11:3 3 4 TYPE M WANNA DET P N N N
ent Spectrum Ana RL RF enter Freq * Ref	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 22 01:37:50 PMFeb 09, 22 TRACE [1:3 3 4 TYPE [MWWW DET [P N N N Mkr1 2.401 7 GF -1.170 dB
ent Spectrum Ana RL RF Inter Freq 1 dB/div Ref 9	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 2 TRACE 1234 TYPE MWWW DET P NNN Mkr1 2.401 7 GH
ent Spectrum Ann RL RF enter Freq 1 dB/div Ref 9 0.0	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 2 TRACE 1234 TYPE MWWW DET P NNN Mkr1 2.401 7 GH
ent Spectrum Ana RL RF Inter Freq 1 dB/div Ref 9	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 2 TRACE 1234 TYPE MWWW DET P NNN Mkr1 2.401 7 GH
ent Spectrum An RL RF enter Freq 1 dB/div Ref 9 00 00	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 22 TRACE [] 2 3 4 TYPE [MWWW DET [P N N N Mkr1 2.401 7 GF -1.170 dB
ent Spectrum Ann RL RF enter Freq 1 dB/div Ref 9 00 00 00 00 00 00 00 00 00 00 00 00 0	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 22 TRACE [] 2 3 4 TYPE [MWWW DET [P N N N Mkr1 2.401 7 GF -1.170 dB
ent Spectrum Ann RL RF enter Freq 1 dB/div Ref 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO Avg Type: Log-Pwr	01:37:50 PMFeb 09, 22 TRACE [] 2 3 4 TYPE [MWWW DET [P N N N Mkr1 2.401 7 GF -1.170 dB
ent Spectrum Ann RL RF enter Freq 1 dB/div Ref 9 00 00 00 00 00 00 00 00 00 00 00 00 0	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO AVIG Type: Log-Pwr AvigHold: 10/10	01:37:50 PMFeb 09, 22 TRACE [] 2 3 4 TYPE [MWWW DET [P N N N Mkr1 2.401 7 GF -1.170 dB
ent Spectrum Ana RL RF inter Freq 1 Ref dB/div Ref 0 0 0 0 0 0 0 0 0 0 0 0 0	Tx. Spur	ious NVN	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO AVIG Type: Log-Pwr AvigHold: 10/10	01:37:50 PMFeb 09, 22 TRACE [] 2:34 TYPE [MWWW DET [P.N.N. Mkr1 2.401 7 GF -1.170 dB
ent Spectrum Ann RL RF enter Freq 7 dB/div Ref 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tx. Spur	PN0: Fast IFGain:Low	IT BLE 1M 2 ENSE:PULSE [Trig: Free Run [ALIGNAUTO AVIG Type: Log-Pwr AvgiHold: 10/10	01:37:50 PMFeb 09, 22 TRACE [] 2 3 4 TYPE [MWWW DET [P N N N Mkr1 2.401 7 GF -1.170 dB
ent Spectrum An RL RF enter Freq 7 dB/div Ref g g dB/div Ref g dB/div Ref dB/div Ref g dB/div Ref dB/div Ref dB/d	Tx. Spur	Fious NVN	IT BLE 1M 2	ALIGNAUTO AVIG Type: Log-Pwr AvigHold: 10/10	01:37:50 PMFeb 09, 2 ITRACE 12:3 4 TYPE MWWW DOT P N/N Mkr1 2.401 7 GF -1.170 dB -19.42 -19.42 Stop 26.50 G
ent Spectrum Ana RL RF enter Freq 1 dB/div Ref g g g g g g g g g g g g g	Tx. Spur	PNO: Fast → IFGain:Low #VI	IT BLE 1M 2 SENSE:PULSE Trig: Free Run #Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:37:50 PMFeb 09, 2 TRACE 1 ≥ 3 4 TYPE MANNAN DET P NNN Mkr1 2.401 7 GF -1.170 dB -19.42 -19.42 Stop 26.50 GF p 2.530 s (30001 p
ent Spectrum An RL RF enter Freq 1 dB/div Ref g dB/div Ref g dB/div Ref g dB/div Ref g dB/div Ref g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g g dB/div Ref g dB/div Ref g dB/di dB/di dB/div Ref g dB/div Ref g dB/div Ref g dB/	Tx. Spur	'ious NVN	AT BLE 1M 2	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:37:50 PMFeb 09, 2 TRACE 1 ≥ 3 4 TYPE MANNAN DET P NNN Mkr1 2.401 7 GF -1.170 dB -19.42 -19.42 Stop 26.50 GF p 2.530 s (30001 p
ent Spectrum Ana RL RF enter Freq * dB/div Ref dB/div Ref 0 0 0 0 0 0 0 0 0 0 0 0 0	Tx. Spur	'ious NVN	IT BLE 1M 2 ENSE:PULSE → Trig: Free Run #Atten: 30 dB → D BW 300 kHz FUNCTION 0 dBm 3 dBm 3 dBm 3 dBm 4 dBm	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:37:50 PMFeb 09, 2 TRACE 1 ≥ 3 4 TYPE MANNAN DET P NNN Mkr1 2.401 7 GF -1.170 dB -19.42 -19.42 Stop 26.50 GF p 2.530 s (30001 p
ent Spectrum An RL RF inter Freq ' B B B B C C C C C C C C C C C C C	Tx. Spur	'ious NVN	IT BLE 1M 2 ENSE:PULSE → Trig: Free Run #Atten: 30 dB → D BW 300 kHz FUNCTION 0 dBm 3 dBm 3 dBm 3 dBm 4 dBm	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:37:50 PMFeb 09, 2 TRACE 1 ≥ 3 4 TYPE MANNAN DET P NNN Mkr1 2.401 7 GF -1.170 dB -19.42 -19.42 Stop 26.50 GF p 2.530 s (30001 p
ent Spectrum Ana RL RF enter Freq * dB/div Ref dB/div Ref 0 0 0 0 0 0 0 0 0 0 0 0 0	Tx. Spur	'ious NVN	IT BLE 1M 2 ENSE:PULSE → Trig: Free Run #Atten: 30 dB → D BW 300 kHz FUNCTION 0 dBm 3 dBm 3 dBm 3 dBm 4 dBm	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	01:37:50 PMFeb 09, 2 TRACE 1 ≥ 3 4 TYPE MANNAN DET P NNN Mkr1 2.401 7 GF -1.170 dB -19.42 -19.42 Stop 26.50 GF p 2.530 s (30001 p



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		rious NVNT B	LE 1M 2440MHz	Ref
A <mark>gilent Spectrum Analyzer</mark> - M R L RF 5	DΩ AC	SENSE:PULSE	ALIGNAUTO	01:34:56 PMFeb 09, 202
enter Freq 2.440		PNO: Wide 🛶 Trig: Fre FGain:Low #Atten: 3	Avg Type: Log- e Run Avg Hold: 100/10 0 dB	Pwr TRACE 1 2 3 4 5 00 TYPE MWWWW DET P N N N
Ref Offset				Mkr1 2.439 715 0 GH 0.518 dBr
0 dB/div Ref 20.0	UdBm			0.010 0.01
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and the second				www.
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40.0				
50.0				
60.0				
70.0				
Center 2.4400000 G Res BW 100 kHz	iHZ	#VBW 300 kH	z	Span 1.500 MH Sweep 1.000 ms (1001 pts
SG			STATUS	
	Tx. Spurio	us NVNT BLE	1M 2440MHz En	nission
	DΩ AC	SENSE:PULSE	ALIGNAUTO	01:35:32 PM Feb 09, 202
enter Freq 13.26		PNO: Fast		Pwr TRACE 12345 TYPE MWWWM DET P N N N
D-60%		FGain:Low #Atten: 3	0 dB	Mkr1 2.439 7 GH
Ref Offset 0 dB/div Ref 20.0				-0.376 dBr
10.0				
0.00				
20.0				-19.48 dE
30.0	<u>2</u>			
40.0				
50.0 60.0		\square		
70.0				
start 30 MHz				Stop 26.50 GH
Res BW 100 kHz		#VBW 300 kH		Sweep 2.530 s (30001 pt
MKR MODE TRC SCL 1 N 1 f 2 N 1 f	2.439 7 GHz	-0.376 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE
3 N 1 f	4.879 3 GHz 4.879 3 GHz 7 261 6 GHz	-42.961 dBm		
4 N 1 f 5 N 1 f 6 7 8 9 10	7.261 6 GHz 9.938 6 GHz	z -57.742 dBm z -59.118 dBm		
7				
9 10				
11				
SG			STATUS	

Tx. Spurious NVNT BLE 1M 2440MHz Ref

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Agilant Spactrum	Analyzer - Swept SA	x. Spur	rious N∖	/NT BLE	E 1M 24	80MF	Iz Ref		
URL	RF 50 Ω AC q 2.48000000	0 GHz	SEN NO: Wide ↔ Gain:Low	ISE:PULSE Trig: Free Ru #Atten: 30 dB	n	IAUTO Avg Type: Avg Hold: 1		Т	2 PM Feb 09, 202 RACE 1 2 3 4 5 TYPE MWWWW DET P N N N N
R and a second	Ref Offset 0.5 dB Ref 20.00 dBm						Mki	1 2.479 7 1	00 0 GH 357 dBr
l0 dB/div F									
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30.0									- Wan
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70.0									
enter 2.48	00000 GHz							Spar	1.500 MF
Res BW 10			#VB\	₩ 300 kHz			Swee	p 1.000 m	
SG						STATUS			
ailant Spactrum	Analyzer - Swept SA	spuriou	IS NVN	T BLE 1	M 2480	MHZ	Emissio	on	
RL	RF 50Ω AC	00 GHz	SEM	ISE:PULSE	ALIGN	AUTO	Log-Pwr	01:40:1 T	3 PM Feb 09, 202 RACE 1 2 3 4 5 TYPE MWWWW
		P	NO: Fast 🔸	Trig: Free Ru #Atten: 30 dB	n	Avg Hold: 1	0/10		DET P N N N N
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm							Mkr1 2.4 0.	80 2 GH 221 dBr
.og 10.0	1								
0.00	-								
20.0									-18.64 dE
30.0									
40.0 50.0		V	<u>^5</u>						a sead a section of the sec
50.0 50.0			\mathcal{N}	and the second	han the second				
70.0									
Start 30 MH Res BW 10			#VB\	W 300 kHz			Swee	Stop 2.530 s	26.50 GH (30001 pt
			Y	FUNCTI	IN FUNCTION	WIDTH	1	UNCTION VALUE	
1 N 1	f 2	2.480 2 GHz	0.221	dBm					
1 N 1 2 N 1 3 N 1	f 22 f 5 f 24	5.748 4 GHz 1.960 5 GHz	0.221 -40.333 -47.853	dBm dBm					
1 N 1 2 N 1 3 N 1 4 N 1 5 N 1 6	f 22 f 55 f 24 f 77	5.748 4 GHz	0.221	dBm dBm dBm					
1 N 1 2 N 1 3 N 1 4 N 1 5 N 1 6 7 8	f 22 f 55 f 24 f 77	5.748 4 GHz 4.960 5 GHz 7.596 0 GHz	0.221 -40.333 -47.853 -57.731	dBm dBm dBm					
1 N 1 2 N 1 3 N 1 4 N 1 5 N 1 6 7 7 8 9 9 10 10 10	f 22 f 55 f 24 f 77	5.748 4 GHz 4.960 5 GHz 7.596 0 GHz	0.221 -40.333 -47.853 -57.731	dBm dBm dBm					
1 N 1 2 N 1 3 N 1 4 N 1 5 N 1 6 - - 7 - - 8 - - 9 - -	f 22 f 55 f 24 f 77	5.748 4 GHz 4.960 5 GHz 7.596 0 GHz	0.221 -40.333 -47.853 -57.731	dBm dBm dBm		STATUS			

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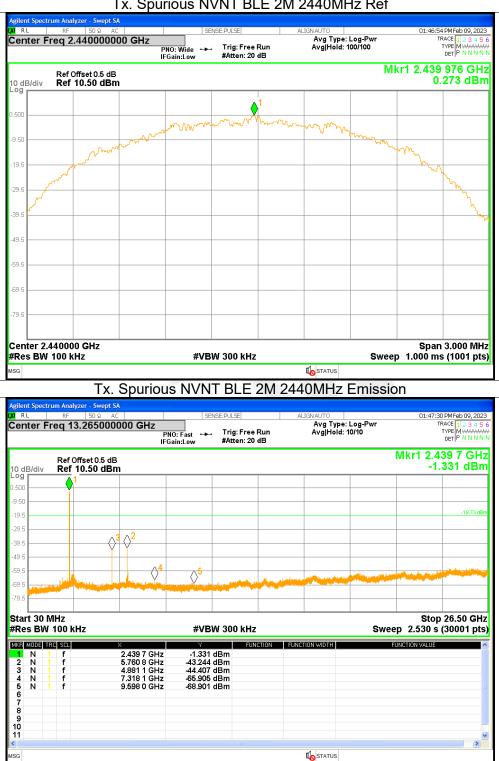
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		urious N\	/NT BLE :	2M 2402MHz Ref	
Agilent Spectrum Analyzer - Swe XI RL RF 50 Ω	AC	SEM	ISE:PULSE	ALIGNAUTO	01:43:15 PMFeb 09, 202
Center Freq 2.40200	0000 GHz	PNO: Wide 🔸	Trig: Free Run #Atten: 20 dB	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 TYPE M WAAWAA DET P N N N N
Ref Offset 0.5 0 dB/div Ref 10.50 d				Μ	kr1 2.401 994 GH: -0.796 dBn
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29.5					- M
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					V
49.5					
59.5					
69.5					
79.5					
enter 2.402000 GHz					Span 3.000 MH
Res BW 100 kHz		#VB\	№ 300 kHz	Swee	p 1.000 ms (1001 pts
SG				STATUS	
		us NVN	T BLE 2M	2402MHz Emissio	on
gilent Spectrum Analyzer - Swe RL RF 50 Ω	AC	SEM	ISE:PULSE	ALIGNAUTO Avg Type: Log-Pwr	01:43:51 PM Feb 09, 202
Center Freq 13.2650	100000 GHZ	PNO: Fast +++ IFGain:Low	Trig: Free Run #Atten: 20 dB	Avg Hold: 10/10	TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N
Ref Offset 0.5	i dB				Mkr1 2.401 7 GH
0 dB/div Ref 10.50 d					-2.272 dBr
.500					
9.50					-20.80 dE
29.5	A.3				
39.5					
49.5		۱ ۸ <u>۶</u>			
69.5	, Indexed	$ \qquad Q^{-} $	and the state of the state		
79.5					
Start 30 MHz		<i>"</i> » (–)			Stop 26.50 GH
Res BW 100 kHz	×	#VB\	V 300 kHz		ep 2.530 s (30001 pts
1 N 1 f	2.401 7 GH 4.805 2 GH	z -2.272	dBm		
3 N 1 f	4.805 2 GH 7.206 9 GH	z -41.957 z -65.170	dBm		
5 N 1 f	9.501 8 GH	z -68.234			
4 N 1 f 5 N 1 f 6 7 8 9 10					
9 10 11					
				-4	>
SG				STATUS	

Tx. Spurious NVNT BLE 2M 2402MHz Ref



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Processor Processor Processor Processor 10 dB/div Ref Offset 0.5 dB Mkr1 2.479 970 GH 0.753 dBr 0.900 0.753 dBr 0.753 dBr 0.753 dBr 0.900 0 0 0 0.753 dBr 0.900 0 0 0 0.753 dBr 0.900 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.90 0 0 0 0 9.9	20 dB/div Log -9.50	RF 50 Ω Freq 2.480000 Ref Offset 0.5 d	AC 000 GHz P	SEN				
PNO: Wide Trg: Free Run #Atten: 20 dB Avg Hold: 100/100 PMC: Wide (Freinfunction) 0 dB/div Ref Offset 0.5 dB Ref 10.50 dBm Mkr1 2.479 970 GH 0.753 dBr 0.753 dBr 0 dB/div Ref 10.50 dBm 0.753 dBr 0.753 dBr 0 dB/div Ref 10.50 dBm 0.753 dBr 0.753 dBr 0 dB/div Ref 10.50 dBm 0.753 dBr 0.753 dBr 0 dB 10 dB/div 10 dB/div 10 dB/div 10 dB/div 0 dB 10 dB/div 10 dB/div 10 dB/div 10 dB/div 0 dB 10 dB/div 10 dB/div 10 dB/div 10 dB/div 10 dB/div 0 dB 10 dB/div 10 dB/div 10 dB/div 10 dB/div 10 dB/div 0 dB 10 dB/div 10 dB/div 10 dB/div 10 dB/div 10 dB/div 0 dB 10 dB/div 10 dB/div 10 dB/div 10 dB/div 10 dB/div 10 dB/div 0 dB 10 dB/div 10 d	10 dB/div Log	Ref Offset 0.5 d	Р		SE:PULSE			7:41 PM Feb 09, 2023
0 BMU Ref 10.50 dBm 0.753 dBr 0 500 0 0 0 0 500 0 0 0 0 0 500 0 0 0 0 0 0 500 0 0 0 0 0 0 0 500 0 0 0 0 0 0 0 500 0 0 0 0 0 0 0 0 500 0 0 0 0 0 0 0 0 0 500 0 <th>-9.50</th> <th></th> <th></th> <th>NO: Wide ↔</th> <th>Trig: Free Run #Atten: 20 dB</th> <th>Avg Type: Log- Avg Hold: 100/1</th> <th>Pwr 00</th> <th>TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N</th>	-9.50			NO: Wide ↔	Trig: Free Run #Atten: 20 dB	Avg Type: Log- Avg Hold: 100/1	Pwr 00	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N
0.900 9.90 9.000 MHz 9.90 9.000 MHZ 9.000 MHZ 9.	-9.50							′9 970 GHz 0.753 dBm
9.50 9.50	-9.50				A 1			
193 193 193 194 194 194 193 194 194 194 194 194 193 194 194 194 194 194 193 194 194 194 194 194 194 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 195 194 194 194 194 194 196 194 194 194 194 194 196 194 194 194 194 194 196 194 194 </td <td></td> <td></td> <td></td> <td>man</td> <td>mmmhhan</td> <td>many and a</td> <td></td> <td></td>				man	mmmhhan	many and a		
19.5	-19.5	- Rom	Maria				www.mmn.	
-39.5 -39.5 -39.5 -49.5 -49.5 -49.5 -49.5 -59.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 -79.5 -59.5 -59.5 MRG -59.5 -59.5 Center 2.480000 GHz #Res BW 100 kHz Span 3.000 MHz Sweep 1.000 ms (1001 pts) MSG -59.5 Center Freq 13.265000000 GHZ PNO: Fast PNO: Fast PNO: Fast PNO: Fast PNO: Fast PNO: Fast PNO: Fast -41.00 AUTO Avg Type: Log-Pwr Avg Type:	10.0	m					- Why	v.,
.49.5	-29.5	pmond"						- Mr.
.69.5	-39.5							- Van
-69.5 -79.5 -	-49.5							
-79.5 Center 2.480000 GHz #Res BW 100 kHz Sweep 1.000 ms (1001 pts Msg Tx. Spurious NVNT BLE 2M 2480MHz Emission Aglent Spectrum Analyzer - Swept SA M RL RF 50.9 AC SENSE-PULSE ALIGNAUTO 02:28:17 PMFeb 09, 202 Center Freq 13.265000000 GHz PN0: Fast → Trig: Free Run IFGain:Low Type: Log-Pwr Avg Type: Log-Pwr Avg Type: Log-Pwr Avg Type: Log-Pwr Avg Type: Log-Pwr Avg Type: Log-Pwr DET P NNN	-59.5							
Center 2.480000 GHz #Res BW 100 kHz #Res BW 100 kHz Tx. Spurious NVNT BLE 2M 2480MHz Emission Agient Spectrum Analyzer - Swept SA M RL RF 50 Ω AC SENSE:PULSE ALIGNAUTO 02:28:17 PMFeb 09, 202 Center Freq 13.265000000 GHz PNO: Fast → Trig: Free Run IFGain:Low Trig: Free Run IFGain:Low Content free Run Hatten: 20 dB	-69.5							
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts) Msg Image: Status TX. Spurious NVNT BLE 2M 2480MHz Emission Agient Spectrum Analyzer - Swept SA Mg RF S0 Q AC SENSE:PULSE Auton Auton Or Colspan="2">OP 22:81:7 PMFeb 09, 202 Center Freq 13.265000000 GHz Trig: Free Run IFGain:Low	-79.5							
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts) Msg Image: Status TX. Spurious NVNT BLE 2M 2480MHz Emission Agient Spectrum Analyzer - Swept SA Mg RF S0 Q AC SENSE:PULSE Auton Auton Or Colspan="2">OP 22:81:7 PMFeb 09, 202 Center Freq 13.265000000 GHz Trig: Free Run IFGain:Low								
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Agilent Spectrum Analyzer - Swept SA 20 RL RF 50 Ω AC SENSE:PULSE ALIGN AUTO 02:28:17 PMFeb 09, 202 Center Freq 13.265000000 GHz PNO: Fast IFGain:Low #Atten: 20 dB	150	Tv	Spurio			-	niesion	
Center Freq 13.265000000 GHz PN0: Fast IFGain:Low PN0: Fast IFGain:Low	Agilent Spec						11551011	
IFGAIN:LOW PROCESS OF			0000 GHz	PNO: Fast ↔	Trig: Free Run	Avg Type: Log-	Pwr	3:17 PM Feb 09, 2023 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N
Ref Offset 0.5 dB Mkr1 2.480 2 GH			íВ	-Gain:Low	#Atten: 20 dB			480 2 GHz
10 dB/div Ref 10.50 dBm -1.745 dBn -1.745 dBn		Ref 10.50 dE	3m				-	1.745 GBM
9.50	0.500							
-19.5	-9.50							-19.25 dBm
-39.5	-19.5							-10.20 0011
-49.5	-19.5		A 3					
	-19.5 -29.5 -39.5 -49.5							
-59.5 -69.5	-19.5 -29.5 -39.5 -49.5 -59.5			5				
	-19.5 -29.5 -39.5 -49.5 -59.5 -69.5			5				
	-19.5 -29.5 -39.5 -49.5 -59.5 -69.5 -79.5 Start 30			5 #∨B\	V 300 kHz			pp 26.50 GHz
-69.5 -10.4 <td< td=""><td>-19.5 -29.5 -39.5 -49.5 -59.5 -69.5 -79.5 Start 30 #Res BV #Res BV</td><td>V 100 kHz TRC SCL</td><td>×</td><td>Y</td><td>FUNCTION</td><td></td><td>Sweep 2.530</td><td>op 26.50 GHz s (30001 pts)</td></td<>	-19.5 -29.5 -39.5 -49.5 -59.5 -69.5 -79.5 Start 30 #Res BV #Res BV	V 100 kHz TRC SCL	×	Y	FUNCTION		Sweep 2.530	op 26.50 GHz s (30001 pts)
199.5 100 Hz	-19.5 -29.5 -39.5 -49.5 -59.5 -79.5 Start 30 #Res BW Miss Moos 1 N 2 N 3 N	V 100 kHz TRC SCL 1 f 1 f 1 f	× 2.480 2 GHz 4.958 7 GHz 4.958 7 GHz	-1.745 (-50.493 (-50.493 (FUNCTION IBm IBm		Sweep 2.530	op 26.50 GHz s (30001 pts)
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Kit Kit Kit Kit 1 N 1 f 2.480 2 GHz -1.745 dBm 2 N 1 f 4.958 7 GHz 50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 3 N 1 f 4.958 7 GHz -50.493 dBm 4 N 1 f 7.439 0 GHz -64.320 dBm	-19.5 -29.5 -39.5 -49.5 -69.5 -79.5 Start 30 #Res BV MKR MOOE 2 N 3 N 4 N 5 N 3 N 4 N 6 N 5 2 N 3 N 4 N 5 10	V 100 kHz 1 f 1 f 1 f 1 f 1 f	× 2.480 2 GHz 4.958 7 GHz 4.958 7 GHz 7.439 0 GHz	-1.745 (-50.493 (-50.493 (-64.320 (FUNCTION IBm IBm IBm		Sweep 2.530	op 26.50 GHz s (30001 pts)



APPENDIX 2- EUT TEST PHOTO

Note: See test photos in setup photo document for the actual connections between Product and support equipment.



Shenzhen STS Test Services Co., Ltd.